ATARI ST USER

June 1993
Issue 88
£3.40
Overseas £3.65

Britain's best for ST ● STE ● TT ● Falcon

GREAT GRAPHICS

How to put the best on your ST screen

FREE Worth £60
COMPLETE PACKAGE

Atari in Europe

Will German enthusiasm revitalise a bright future?

We review:
- NeoDesk & CLI
- Truepaint
- Convector

Plus games galore

europress ENTERPRISE

9 770952 300046

Ladbroke Computing

33 Ormskirk Rd,
Preston, Lancs,
PR1 2QP

Ladbroke Computing International are one of the longest established home computer dealers in the U.K. We have developed an extensive customer service policy which involves testing of all hardware prior to despatch to ensure that goods arrive in working order, offering free advice and support over the phone and keeping customers informed. Although our prices are not always the cheapest we do endeavour to offer consistently good service and backup.

All prices are correct at copy date 22/4/93 (while stocks last), and are subject to change without prior notice. All prices include VAT but exclude delivery.

How to Pay
You can order by mail Cheques/Postal Orders made payable to Ladbroke Computing. Or give your credit card details over the phone.

Delivery
Postal delivery is available on small items under £40 (Normally £3, phone for details). Add £7 for courier delivery. Next working day delivery on mainland UK subject to stock (£11 for Saturday delivery).

Open Mon-Sat 9.30am to 5.00pm.
Ladbroke Computing Ltd trading as Ladbroke Computing International.

Fax: (0772) 561071
Tel: 9am-5.30pm (5 Lines)
(0772) 203166

PC Emulators

- Run PC Software on your ST
- Full installation instructions
- XT or AT Emulation

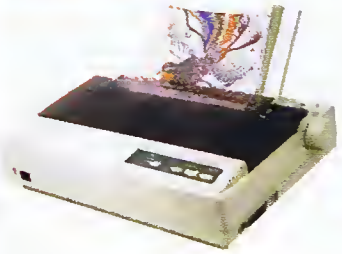
PC Speed STFM (XT)	£55.00
PC Speed STE (XT)	£55.00
AT Speed STFM (8MHz)	£129.00
AT Speed STE (8MHz)	£139.00
AT Speed C16 STFM	£189.00
AT Speed C16 STE	£199.00
DR DOS 5	£14.00

Falcon 030

- 16MHz 32 bit 68030 Central Processor, 16MHz blitter
- 32MHz 56001 Digital Signal Processor
- 1.44Mb 3.5" Floppy up to 14Mb RAM
- Displays 65536 colours from 262144 palette at 768 x 480 resolution
- 8 Channel 16 bit, higher than CD quality stereo sound sampling
- Multi TOS MultiTasking Operating System

FALCON 1Mb No HD	£579.00
FALCON 4Mb 65Mb HD	£979.00

Printers



Star

Star LC100 Colour	£165.00
Star LC20	£124.00
Star LC24/100 Mono	£179.00
Star 2 year warranty	£9.99
Starjet SJ48 Bubblejet	£210.00
Star SJ48 Auto Sheetfeeder	£55.00

Citizen

Citizen Swift 240 Colour	£270.00

Hewlett Packard

HP Deskjet 500	£339.00
HP Deskjet 550 Colour	£580.00

Lasers

Seikosha OP104	£549.00

- 512K RAM (Exp to 2.5Mb)
- HP Laserjet IIP emulation
- 14 resident fonts
- Centronics/RS232C/RS422
- 12 months on-site warranty

Seikosha 512k RAM upgrade	£69.00
Seikosha Toner (2 units)	£19.00
Seikosha Drum Unit	£79.00
Ricoh LP1200	£759.00

- Fully HP III compatible
- 400Dpi resolution
- 2Mb RAM on board
- Serial & Parallel ports
- 12 months on-site warranty

Add £3 for Centronics cable and £7 for next working day courier delivery (subject to stock).

3.5" Floppy Disks

10 HD 3.5" Disks	£9.99
10 3.5" Disks	£5.41
50 3.5" Disks	£23.50
100 3.5" Disks	£44.65
50 Capacity Box	£4.99
100 Capacity Box	£7.99

STACY Batteries

- Complete re-chargeable battery upgrade kit for STACY
- Weighs 2.2 pounds
- Slow charge in 14 hours
- Fast charge in under 4 Hours (with optional fast charger)
- Fits into STACY's battery compartment and is charged by the STACY's power supply

STACY Battery Upgrade	£49.99
Fitting Service	£10.00

Mice

Biocon Mouse £14.99
High quality, high resolution replacement mouse. 2 Microswitched buttons

It's a Mouse £9.99
High quality replacement mouse. 290dpi microswitched buttons.

Floppy Drives

Cumana external ST drive £64.99
While stocks last

Internal ST Drive £44.99
ST's case may need modification. Full instructions supplied.

Joysticks

PRO 5000 Black	£7.00
ZIP Stick	£11.99
PRO Star	£14.99
PRO 5000 Mini (LED's)	£14.99
Navigator	£14.99
Quickjoy Turbo	£6.99

Accessories

Forget Me Clock II	£17.99
ST Dust Cover	£3.99
Mouse Joystick extension	£4.99
3.5" Disk Head Cleaner	£3.99
Monitor Switch Box	£19.99

STE Packs

- Includes Mouse and built in modulator to connect to TV.
- 4 Great games: 9 lives, Escape from the planet of the robot monsters, Final fight, Sim City.
- 1st Word wordprocessor, Neochrome Art & Ani ST

520 STE	£219
1Mb STE	£229
2Mb STE	£275
4Mb STE	£329
1040 STE CURRICULUM 2	£289

Monitors

Atari SC1435 Col Mon £199.00
The SC1435 comes complete with cable and tilt/swivel stand

Trust MM100 Mono Monitor £139.99
This 14" SVGA Monochrome monitor comes complete with adaptor for the ST. Fully compatible with all High Resolution programmes

Philips 8833 MkII Col Mon £229.99
The 8833 MkII comes complete with Lotus Turbo Challenge 2 game.

Colour SVGA Monitor £255.00
High quality Colour SVGA monitor. For use with Falcon (needs adaptor).

Philips SCART to ST/STE	£9.99
8833 MkII to ST/STE	£9.99
Falcon VGA Adaptor	£9.99
Falcon ST Monitor Adaptor	£9.99

Biocon Pen Mouse

The Biocon Pen mouse is a hi-resolution opto mechanical mouse with 2 microswitched buttons and one bubble switch. Shaped like a pen it makes freehand drawing easier and is fully compatible with all applications.

Biocon Pen Mouse £24.99

Psion Series 3

Psion 3 128K	£170
Psion 3 256K	£234

- 16 Bit Processor
- Graphical Windowing Multi Tasking OS
- 128K or 256K RAM
- Up to 4Mb Card Storage
- Built in Wordprocessor, Database, Calculator, To Do Manager and OPL programming language

Parallel Interface	£28.00
Serial RS232 Interface	£64.00
Psion 3 PSU	£14.00
Spreadsheet (256K only)	£63.00
128K RAM SSD	£74.00
512K RAM SSD	£184.00
1Mb RAM SSD	£274.00
256K Flash SSD	£64.00
512K Flash SSD	£109.00
1Mb Flash SSD	£184.00

Atari Lynx 2

Lynx 2 Batman pack £89.00

- 16 Bit Processor
- Full Colour Games
- 4096 Colours
- Stereo Sound
- Headphone Socket

Dracula	£19.99
Hydra	£19.99
Dirty Larry	£27.99
Pit Fighter	£31.99
Chips Challenge	£14.99
Hard Drivin	£28.99
Scrapyard Dog	£9.99
Warbirds	£28.99

Coming Soon DinOlympics, World Class Soccer, Desert Strike.

Phone for latest releases
WIDE RANGE IN STOCK

Data Pulse Plus

Hard Drives

- All Data-Pulse Plus Hard Drives are formatted, partitioned and tested before despatch, ready to "plug in and go"
- Fully Autobooting and Autoparking
- DMA device selector & on/off switch on front of case for ease of access
- DMA Out port for daisy chaining extra drives or Atari Laser printers
- Full metal case measuring 300mm x 285mm x 51mm (wdh), providing good shielding and monitor stand
- We use only high quality ICD controller boards including on-board clock and software
- Only Highest Quality Quantum or Maxtor mechanisms used
- All drives come with full 12 months warranty and free expert help and advice over the phone
- All drives include Vault archiver, Backup software, Virus killer, MCP shell program, Midistudio Master demo

Data-Pulse + 42Mb	**£319.99**
Data-Pulse + 85Mb	**£379.99**
Data-Pulse + 127Mb	**£429.99**

Falcon Data-Pulse Plus

The same high quality components are used in our Falcon hard drives as in the ST DataPulse Plus drives above. However the Falcon does not require an ICD host adaptor. Therefore these drives have a 50-way SCSI connector on the back of the drive which allows direct connection to the SCSI port of the Falcon using the cable supplied.

Data-Pulse +85Mb Falcon	**£354.99**
Data-Pulse +127Mb Falcon	**£404.99**

ST/Falcon Data-Pulse Plus

These drives are configured as Falcon drives but include the ICD Link external host adaptor (no clock) to allow connection to the ST. The drive can be used with a Falcon by obtaining a 50-way SCSI cable.

Data-Pulse +85Mb/Link	**£379.99**
Data-Pulse +127Mb/Link	**£429.99**
Falcon SCSI Cable	**£39.99**

ICD's LINK

- Adapts the ST's DMA port to a 50 way SCSI Connector
- Allows connection direct to SCSI hardware including Hard drive Mechanisms, Floptical Mechanisms, Optical Drives, CD ROM's

ICD LINK	**£69.99**

Floptical Drives

- Capable of storing over 20Mb of uncompressed data on a single 3.5" Floptical disk
- Can read and write 720K and 1.44Mb 3.5" Floppy disks
- Average access time 65ms
- Data transfer rate of 200K per sec (6 times faster than Floppy disk)
- 3.5" SCSI mechanism
- Utilises only high quality ICD host adaptors
- High quality Case and PSU as used in all Data-Pulse Plus Hard Drives (see opposite for details)
- Available as a stand alone unit, an upgrade to existing Data-Pulse (Plus) drives or as a combination unit with Hard drive mechanisms from 42Mb to 1.2Gb
- Ideal for fast data backup from hard drive
- Low cost removable media

21Mb Floptical Drive	**£399.99**
Datapulse upgrade	**£299.99**
42Mb HD+21Mb Floptical	**£609.99**
85Mb HD+21Mb Floptical	**£669.99**
127Mb HD+21Mb Floptical	**£719.99**
170Mb HD+21Mb Floptical	**£789.99**
213Mb HD+21Mb Floptical	**£869.99**

All the Above drives include one 21Mb 3.5" Floptical Disk

21Mb 3.5" Floptical Disk	**£24.99**
5 x 21Mb Floptical Disks	**£114.95**
10 x 21Mb Floptical Disks	**£199.99**

Diamond Back II

- Extremely Fast backup to floppy/floptical/hard drive with optional compression and encryption
- On Line help facility makes it very easy to use
- Load/Save Custom backup configurations
- Incremental backups by date/time or Archive bit (TOS 1.4)

Diamond Back II	**£29.99**

HD Turbokit

- De-Fragmentation Utility optimises the speed of your hard drive by moving all data blocks into contiguous data areas

HD Turbokit	**£4.99**

Image CAT

- Catalogue all image files on your hard disk. Prints tiled display with path names

Image CAT	**£24.99**

ST Networks

Powernet Network Software

- MultiTasking Network software allows applications to run on the server while drive and printer accesses take place in the background
- Allows the mixing of Network types. ie LanNet and MidiNet devices
- Full Falcon compatibility using LanNet device
- Ethernet compatibility and E-Mail coming soon.

LanNet with PowerNet	**£89.99**
MidiNet with PowerNet	**£59.99**

Prices quoted are for 1 Node. Each computer attached to a Network requires 1 Node. A LanNet device is required to Utilise the Lan Port on a Mega STE, TT or Falcon.

Silhouette

- Autotraces bit image graphics to resolution independant vector graphics
- Produces Beziers, B-Splines, High resolution grey scales
- Supplied with FontGDOS
- Supports FSM GDOS
- Imports IMG, DEGAS, TINY, MacPaint, GEM, SGF Bit image files
- Exports IMG, GEM (1.3), SGF, DXF, EPS (Postscript) files
- Supports direct scanning via Scanlite accessory Requires 1Mb ST, Hi-res monitor

Silhouette	**£60.00**

Calamus Vector Graphics (CVG) support coming soon

Calamus V1.09N	**£124.99**
That's Write 2	**£109.99**
1st WordPlus	**£39.99**
Timeworks 2 DTP	**£39.99**
Signa's Script WP	**£79.99**

Aries Upgrades

- Will fit any ST(F)(M) or Mega ST
- Extremely compact in house designed Multi-layer circuit board smaller than a credit card
- Upgradeable in stages from the base 512K to 2Mb then 4Mb
- Solder in design for greater reliability
- Fully tested prior to despatch
- All Aries RAM upgrade boards come packaged in a 10 capacity disk box, complete with full fitting instructions and memory test disk.

512K Board	**£39.99**
2Mb Board	**£79.99**
4Mb Board	**£129.99**
512K SIMM's STE	**£9.99**
2Mb SIMM's STE	**£49.99**
4Mb SIMM's	**£94.99**
2 x SIPP to SIMM adaptors	**£3.00**

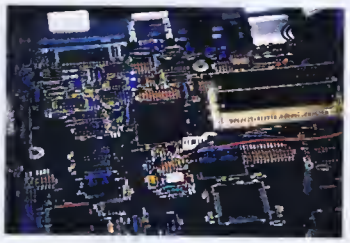
Repair Services

Our Service department can repair ST's in minimum time at competitive rates. We can arrange for fully insured, courier pickup and return delivery of your machine to ensure it's safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day.

We can fit memory upgrades, PC Emulators, Security devices, ROM upgrades, hard drives to Mega STE's etc.

We offer a Quotation service for £15 for which we will examine your machine and report back with an exact price for repair. If you do not wish to go ahead with the repairs then just pay the £15. However if you do go ahead then the charge is included in the minimum charge.

Please note: The minimum charge covers labour, any extra parts are chargeable.



Quotation	**£15.00**
Minimum repair charge	**£35.25**
Same day service	**£15.00**
STFM(E) PSU	**£39.99**
1Mb internal drive	**£44.99**
A/B Boot switch	**£4.99**
TOS 2.06 + Switch STFM	**£65.00**
TOS 2.06 + Switch STE	**£65.00**
Courier Pickup	**£11.00**
Courier Return	**£7.00**

Phone for price and availability of ST spares

Scanlite

- For those times when all you want to do is quickly scan an image and not bother with a larger editing program
- Supports GOLDEN IMAGE, Migraph, Geniscan and Daatascan Hand Scanners
- Works in low, medium, high and BigScreen resolutions
- Instantly accessible from within programmes supporting accessories
- Scans directly into Silhouette and Megapaint II

Scanlite Accessory	**£20.00**

Ladbroke Computing

33 Ormskirk Rd,
Preston, Lancs,
PR1 2QP

Fax: (0772) 561071
Tel: 9.00am-5.30pm (5 Lines)
(0772) 203166

Contents

midi and music ❖ emulation ❖ communication ❖ dtp ❖ business

Aspects of the ST

Midi and music.....86
No serious ST musician can afford to ignore the best music pages in the business

Emulation.....89
The column that exploits the ST's chameleon-like tendencies to the full

Communications.....91
The world of modems and bulletin boards – mass communications for the 90s

DTP.....93
Producing top-quality newsletters and posters is easy with your ST and this column

Business.....94
How you can use your ST in business and advice on getting the most from your software

GAMER

	Page
Gamer Globe	66
Graham Gooch Cricket	69
International Rugby	70
International Truck Racing	71
Shoot-'em-up Construction Kit	71
Hero Quest	71
Action Sport	72
Championship Manager '93	74
Microprose Soccer	77
Falcon	77
Cheat Mode	78

Page 63

Complete and unrivalled ST games coverage

The CoverDisk

HiSoft's DevpacST 2 is a powerful assembly language used by many professional games programmers. It's complete, unrestricted and all yours, FREE!

PLUS:

- **Psycho Pig 2 is a brilliant and zany arcade game in which you guide the porky hero in his battles against the criminal underworld**
- **SilkMouse is a utility that will vastly improve mouse performance. More than just a mouse accelerator, it has other useful features such as a screen saver facility**
- **DISKSPC - Check out how much space is used and how much remains on any floppy or hard drives attached to your ST**
- **The useful extended format utility ABFormat enables you to cram even more on to a standard floppy disk**
- **ST Picture Formats is a text file detailing the most popular picture formats for the ST – great for programmers wanting to use pictures from various art packages in their work.**

The DISK starts on page 12

specials

27 Fix facts
Got a fault with your ST? Many are simple to fix, even by the most inexperienced technicians

48 Atari in Europe
Our man in the heart of Europe takes a look at Atari markets across the continent

reviews

24 Slave Driver
A valuable tool for any ST musician planning live musical performances is tried and tested

30 Truepaint
HiSoft's new art package is packed with features including true colour capabilities for use with the Falcon

34 NeoDesk 3
We check out the latest version of this respected replacement Desktop and find it top of the class

37 NeoDesk CLI
This command line interface working alongside NeoDesk, could be useful to experienced users

40 Convector Prof
An auto-tracing package with an excellent range of features that sets new standards on the ST

59 Musicom
One of the first music programs for the Falcon, we put this direct-to-disk recording system through its paces

60 Arabesque
This feature-packed package offering both bitmap and vector graphics could be let down by ease of use

regulars

7 News
MultiTOS release imminent, HiSoft expand further plus all the rest of this month's news

12 CoverDisk
How to get to grips with the great software giveaways crammed on to this month's disk

38 Write Now
This is your soapbox, where you get a chance to say what you think of recent events in the Atari market

43 C programming
We continue our guide to programming using HiSoft C, this month looking at its impressive array of looping functions

46 STOS 3D tutorial
Shoot and be shot in the last of our tutorials to this versatile programming language

52 Public Sector
Games, education software, on ort package and a whole lot more are the latest additions to the public domain

56 Advice Service
Your troubles are put to our agony uncle who, as ever, helps to get your ST up and running

80 Subscriptions
Guarantee a copy of your favourite ST magazine, and get it delivered to your home free every month

82 Competition
Win a £3,000 dream holiday simply by buying your favourite ST monthly!

READER OFFERS

DevpacST2 15
Manuals to help you get the very most from this top assembly language and upgrades to v3

Great opportunities 58
Another chance to pick up on some of the superb offers we've been running alongside our recent CoverDisks

EDITOR John Butters
ART EDITORS Terry Thiele, Tym Lecky, Alan Jones
TECHNICAL EDITOR Darren Evans
PRODUCTION EDITOR Phil Morse
STAFF WRITERS Ben Styles, Jonathan Maddock

AD MANAGER Simon Lees
AD PRODUCTION Barbara Newall
MARKETING ASSISTANT Lucy Oliver

PRODUCTION Sandra Childs
CIRCULATION DIRECTOR David Wren
DISTRIBUTION COMAG (0895) 444055
SUBSCRIPTIONS 051-357 2961

Published by Europress Enterprise Ltd.
Europa House, Adlington Park,
Macclesfield SK10 4NP
Tel: 0625 878888 (all departments)
Fax: 0625 850652

CHAIRMAN Derek Meakin
MANAGING DIRECTOR Ian Bloomfield

Member of the Audit Bureau of Circulation

Atari ST User is an independent publication and Atari are not responsible for any of the articles in this issue or for any of the opinions expressed.

© 1993 Europress Enterprise Ltd.
No material may be reproduced in whole or in part without written permission.
While every care is taken, the publishers cannot be held legally responsible for any errors in articles, listings or advertisements.

EUROPRESS ENTERPRISE

Printed in the UK by Carlisle Web Offset, Carlisle, Cumbria

GASTEINER

Unit 2, Millmead
Business Centre
Millmead Road
London N17 9QU
Tel: 081 365 1151
Fax: 081 885 1953

GOLDEN IMAGE · ALFA DATA · ICD · POWER · ATARI

ATARI COMPUTERS

520 STE 1/2Mb.....£209.00
520 STE 1Mb.....£219.00
520 STE 2Mb.....£265.00
520 STE 4Mb.....£320.00
1040 STE 1Mb.....£250.00
ST BOOK 1Mb 40Mb H/D.....£1275.00

FALCON COMPUTERS

Falcon 1Mb.....£550.00
Falcon 4Mb.....£750.00
Falcon 1Mb 65 Mb HD.....£850.00
Falcon 4Mb 65 Mb HD.....£899.00
Falcon 4Mb 120 Mb HD.....£1099.00
Falcon 4Mb 240 Mb HD.....£1299.00

FALCON HARD DRIVES

40 Mb.....POA 65 Mb.....POA
120 Mb.....POA 240 Mb.....POA

NEW GASTEINER SPARE SHOP

Power Supply (ST, STF, STFM, STE)..£32.95
Atari Internal Drive.....£45.00
Keyboard STFM and STE.....£59.00
STE Mother Board No RAM.....£149.00
DMA Chip.....POA
TOS 2.06 STE/STFM.....£59.00
1/2Mb STFM Mother Board.....£149.00
Outer Casing STE.....£39.00
Atari Original Mouse.....£8.00

MONITORS

SVGA Monitor for Falcon.....£239.00
Atari SC1435.....£199.00
Multisync Monitor.....£399.00
Gasteiner Mono High Res.....£149.00

PRINTERS

Citizen Swift 9 Colour.....£179.00
Citizen Swift 240 Colour.....£279.00
Citizen Swift 200 Colour.....£219.00
HP 500.....£309.00
HP 500 Colour.....£439.00
HP 550 Colour.....£550.00

RAM

8 Mb RAM for STE, Mega ST/STE (COMING SOON).....POA
Marpet XRAM Deluxe Simms Upgrade For ST, STF, STFM and Mega ST
0Mb.....£30.00
1/2Mb.....£39.00
2Mb.....£85.00
4Mb.....£139.00
Gasteiner STE and Mega STE Upgrade
1/2Mb.....£6.99
2Mb.....£59.00
4Mb.....£109.00

SCANNERS

256 Greyscale Scanners with OCR Option. Features:- True Greyscales, 100-400 DPI, 105mm Head + Touch Up + MergeIt.....£119.95
Scanner + OCR Software.....£179.00
Full OCR Software.....£165.00
OCR Upgrade for any GoldenImage or Alfadata Scanner only.....£69.00

HARD DRIVES

GASTEINER ? DRIVE FOR ST, STE, MEGA ST, MEGA STE
* High performance drive
* Supports up to 7 extra SCSI devices
* Autobooting * DMA throughport * Autoparking
* Accept a second Internal drive * Optional battery backed clock
* 12 Months back to base warranty
* Comprehensive manual * Fast SCSI drive
* High quality metal casing * Internal PSU

42Mb (24Ms) Quantum.....£289.00
50Mb (24Ms) Seagate.....£289.00
85Mb (14Ms) Quantum.....£369.00
120Mb (14Ms) Conner.....£429.00
170Mb (14Ms) Quantum.....£469.00
240Mb (14Ms) Conner.....£569.00
330Mb - 1.2 Giga byte.....POA
Floptical 20Mb Drive.....£399.00
Floptical 20Mb Disks.....£24.00
Optional Clock for above.....£15.00

HARD DRIVE KIT

GASTEINER MAKE YOUR OWN HARD DRIVE

* Case.....£35.00
* 45W PSU.....£35.00
* SCSI Cable.....£6.00
* Power Cable.....£5.00
* ICD Host Adaptor (with clock).....£79.00
* Host Adaptor.....£59.00
* DMA Cable.....£6.00
* The Link.....£79.00
* ICD Host Adaptor.....£69.00
* Cleanup ST.....£29.00

BARE HARD DRIVES

50Mb Seagate.....£199.00
85Mb Quantum.....£249.00
120Mb Conner.....£299.00
170Mb Conner.....£329.00
170Mb Quantum.....£349.00
42Mb Quantum.....£179
240Mb Quantum.....£499
105Mb LPS Quantum.....£299
85Mb Conner.....£229
52Mb LPP Quantum.....£279

MEGA STE HARD DRIVE

With Official Atari MEGA STE KIT
Atari Host Adaptor and Formatting Software

Mega STE Kit.....£39.00
Kit + 50Mb Hard Drive.....£219.00
Kit + 120Mb Hard Drive.....£379.00
Kit + 210Mb Hard Drive.....£499.00

ACCESSORIES

Monitor Switch Box Colour/Mono.....£14.95
Multisync Switch Box.....£29.95
Printer Cable.....£6.00
Modem Cable.....£6.00
Null Cable.....£6.00
Serial Cable.....£6.00
Philips/Atari Cable.....£10.00
Scart Cable.....£10.00
Box of 10 Disks.....£7.00
5.25" External Drive.....£89.00
3.5" External Drive.....£50.00
3.5" 1.44 External Drive for Mega STE/TT.....£99.00
Blitz Turbo.....£25.00
Ripper Cartridge.....£25.00
Supra Fax-Modem.....£250.00
Ad Speed ST.....£140.00
Ad Speed STE.....£165.00
Auto Sensing Mouse/Joystick Switch.....£12.95
Forget Me Clock II.....£14.95

MICE + TRACKBALL

AlfaData
Infra Red Mouse.....£45.00
Mega Mouse.....£10.95
Mega Mouse (Mat+Holder).....£14.95
300 DPI Optical Mouse.....£27.95
The Trackball.....£29.95
Crystal Trackball.....£34.95
Optical Pen Mouse.....£35.95
Auto Mouse/Joystick Switch.....£12.95
Golden Image
GI 600.....£13.95
Optical Mouse.....£23.95
Brush Mouse.....£19.95
New Golden Image
400 DPI Mark 2 Mouse.....£14.95

SOFTWARE

Word Processors
1st Word +.....£55.00
Calligrapher Pro.....£79.00
Calligrapher Gold.....£109.00
That's Write V1.4.....£19.00
DTP Software
Pagestream V2.2.....£149.00
Timeworks Publishing 2.....£80.00
Calamus V1.9.....£129.00
Calamus SL.....£339.00
OCR Software.....£165.00
Touch Up.....£49.00
Easy Draw.....£34.00
Cyber Studio.....£25.00
Cyber Control.....£25.00
Cyber Paint.....£25.00
Human Design Disk.....£10.00
Future Design Disk.....£10.00
3D Font 1.....£10.00
CAD 3D.....£10.00
CAD 3D Developers Disk.....£10.00
Neo Desk 3.....£28.00
Thats Fun Face.....£18.00
Signs + Banners.....£15.00
Calendar + Stationery.....£15.00
Greeting Cards.....£15.00
Music Software
C-Lab Notator.....£279.00
C-Lab Creator.....£179.00
Cubeat.....£150.00
Cubase.....£279.00
Cubase Light.....£150.00

REPAIR SERVICE

New service centre/repair for most Atari computers. We offer a quotation service of £10 for which we will examine your computer and report back with an exact quotation price for the repair. If the repair is carried out the £10 is then deducted from your bill.

PLEASE PHONE IN FOR REPAIRS ON ST

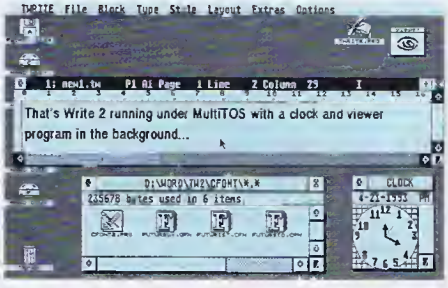
DELIVERY CHARGES:	UK MAINLAND (not Highlands)
Small consumables & software items.	Despatched by post please check charges when ordering
Other items, except lasers	Next day courier service, £10 per box
Offshore and Highlands	Please enquire
IN ADDITION WE OFFER THE FOLLOWING EXPRESS SERVICES	
Saturday deliveries	Normal rate plus £15 + VAT per box
AM next day	Normal rate plus £8 + VAT per box

Products advertised represent a small sample of our in-stock range. A complete price list is available on request.

E. & O. E. Prices subject to change without notice.
Goods subject to availability.
Specifications subject to change without notice.
All Trademarks acknowledged.

MultiTOS makes its move

by Andrew Wright



The real thing at last – MultiTOS, v1.00

THE long-awaited multitasking operating system MultiTOS is due for imminent release according to Atari's marketing manager, Darryl Still.

Although distribution channels are still to be finalised, HiSoft will be one of the first to sell the disk-based version and it should cost £29.95.

MultiTOS has been two years in development, having started out life as a PD experiment in the shape of Eric Smith's MINT, a recursive acronym standing for Mint Is Not TOS.

Atari have been trying hard to make it part of TOS, of course, and it looks as if they have finally succeeded.

Version 1.0 features an English language installation program although it can be copied to the boot disk manually if needed. Several small applications are included – a clock, line drawing demo, file viewer and a windowing application for running TOS programs in GEM windows.

MultiTOS is similar in appearance to the TT and Falcan versions of TOS with plenty of options for customisation, including coloured window backgrounds, scroll and move bars.

It will run on any ST/STE with 1Mb of memory and a hard disk but at least 2Mb will be needed to make use of the multitasking and task-switching capabilities.

Past previews in other magazines have been based on MINT rather than MultiTOS, but next month we'll include an exclusive review of the release version. HiSoft are on 0525 718181.

MT Software go into print

MT Software, the Isle of Wight based PD library, is set to enter the world of publishing with the launch of the 600-page *Beginner's Guide to STOS Basic*.

According ta proprietor Mark Thamsan, it is "a complete pragramming caurse that takes the beginner from basic principles through to the development of complete programs".

The guide is supplied in a hard plastic ring binder and runs to 618 pages plus two double sided disks containing nearly 200 programming examples.

Tutorials are included teaching users how to program games and applications, from shoot-'em-ups to a wordprocessor and database. Full programming instructions are provided for games like Alien Attack, Bonk the Gonk, Shoot the Spook, a name and address program, a comprehensive Degas-compatible art package and scores of smaller projects.

Other subjects covered include GCSE mathematics, sound sampling, music and animating sprites. The package costs £39.95 plus p&p and is available from MT Software on 0983 756056.

Hot off the press

NOTTINGHAMSHIRE-based ST hardware supplier and repair specialist C & P Rossiter have annaunced an unusual new service.

Using state-of-the-art hot foil printing technology and the latest Atari DTP software, the company can design and supply items such as business cards, key fobs, boakmarks, rulers and coasters in a range of eye-catching colours.

For example, business cards are available in the standard size with the customer's name, address and logo, if required.

The gloss-coated cards are available in brown, black, burgundy, olive, blue, dark blue, dark green, red, marigold, beige, yellow, silver, grey and white.

The text is foil printed in one of ten colours – gold, silver, copper, red, green, blue, orange, black, white and brown.

The cards are designed using the top-end DTP package Didot Professional Colour Design running on a TT.

Prices range from £12 for 100 ta £35 for 500 and there is a one-off charge of £15 for artwork on initial orders.

Contact 0602 631631.

Top developer expands ST coverage

HISOFT are set to venture into new market areas fallowing their acquisitian of Audia Visual Research, a firm well known for sompling products Mastersound and Stereo Replay.

AVR is the trading name of 2-BIT Systems Ltd and the campany's directars will jain HiSoft ta pravide technical help with new and existing AVR products.

Future hardware will be marketed by HiSoft under the AVR name, althaugh all accompanying software will carry the much-respected HiSoft name.

AVR's current range is marketed by Micradeal and this arrangement will cantinue under the firm's new awnership.

"The buy-aut takes HiSaft inta new markets and cansolidates its already strang position in the Atari marketplace," said David Link, HiSoft's awner.

"We'll be cancentrating on multimedia solutions for the ST and Falcan platfarms such as the combined manachrome videa digitiser and sampler called Video Master selling far under £70."

Eager

Meanwhile, HiSaft have also picked up the distribution rights ta ane af the mast eagerly awaited ST utilities, Datalight 2.0, a disk space doubler fram Germany.

Datalight loads fram the AUTO falder and automatically compresses all data written to both hard and floppy disks. It does this "on the fly" sa that the user is rarely aware that it is happening.

The anly thing the user sees is a doubling of available space an whichever drive is in use. It is expected to sell far under £50 and should be available shartly.

Also in the pipeline is anather praduct fram Shift – the German develaper af Arabesque Professianal and Convectar – called Interface, an advanced 3D resource canstructian set.

Link: Expands HiSoft with AVR buy-out

VGA adaptor from Ladbroke

LADBROKE Computing have just annaunced a new adaptar cable that allaws VGA and SVGA monitars – the kind used with PCs – ta be connected to any ST.

The Lancashire-based campany develaped the cable ta keep up with the cantinuing demand far high resalutian manitars naw that the SM124/144 series are being discantinued by Atari.

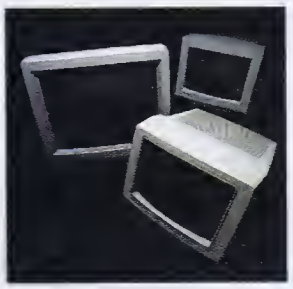
Using the cable, any VGA/SVGA manitar will work with the ST in high resalutian made and praduces a display same 10.5 inches acrass an a 14 inch screen – slightly larger than the screen display an the ald SM124.

Calaur VGA/SVGA manitars can be used, but they will anly display mana.

The cambinatian has been tested with Overscan, the campany claims, and the cable includes a small pieza beeper ta relay key clicks and system beeps. Users needing mare saund can easily add amplified speakers as a 3.5 mm autput jack is pravided.

Ladbrake Computing supply the cable far £99.99. Specially selected 14in mana VGA manitars are alsa available, with a tilt and swivel base, priced £139.99 including the cable.

The firm can be cantacted an 0772 203166.



Use VGA monitors with your ST

Citizen extend with colour

CITIZEN's Swift range af dat matrix printers has been extended this month with the launch af the Swift 90C, a 9-pin calaur model which will sell for £257.

It was shown for the first time at the CeBit infarmation technalagy exhibitian in Hanaver recently, and will be available in Britain from late spring.

The machine runs at 180 characters per secand, and 216cps when printing at 12 characters per inch. Six fants can be used in near letter quality mode, and twa in draft.

The manufacturer claims that it is among the quietest models an the market, and it is Epson FX850-compatible.

"There is a large and continuing cansumer demand far a printing salutian that affers a low buying price, while maintaining high quality autput," said Citizen's Anthany Odhams.

"Ta satisfy this demand, we have built on the strengths af the Swift 9 and incarparated many features of the successful 24-pin Swift 2 series into the Swift 90C."

A mono versian will be sold with a £233 price tag, with a calaur kit available as an extra.

Swift 90C: Satisfying consumer demand

Titanic trio for Falcon

TITAN Designs, the Birmingham-based develaper, have three new praducts far the Falcon – twa genlocks and a video digitiser.

Graffiti is a budget-priced true calaur genlack that will alsa wark an the STE with a suitable adaptar.

The saftware is still being develaped, but will include same advanced manipulatian features, including ratatian, resizing, and stretching af text, which will be able ta be imparted in Calamus, PastScript ar Didat farmat.

There is an impressive list af special effects such as flash, melt, disperse, vacuum, explade, implade, mirrar and cycling. Titan hape ta keep the price ta between £100 and £130.

Fresca is a prafessianal genlack which will be campatible with the Expase digitiser. It will have all the capabilities af Graffiti plus real time 3D text and abject manipulatian at any af the Falcan's resalutians including the aver-scanned 768 by 480 made. Other effects such as dissalves and a dynamic light saurce are planned and the price will be £299.

The third praduct is Expase, again ta be priced at £299, which will be able ta capture images fram several videa saurces including camcarders and the Canan Ian camera. Images can then be displayed an the screen at resalutians up ta 512 by 512 pixels (nan-interlaced) ar transferred directly ta the Fresca genlack.

Cantact David Encill an 021-414 1630 far mare infarmatian.

DIARY DATES

20 to 23 May
Spring Computer Shapper Shaw
Organiser: Blenheim Online
Venue: Olympia, Landan
UK's largest direct computer praduct sales farum.

3 to 5 September
Computer Show '93
Organiser: Interexpa & Media – Halland
Venue: Den Basch, Halland
Large camputer games shaw far ST , Amiga and PC.

24 to 26 September
Benelux Computer Shaw '93
Organiser: Interexpa & Media – Halland
Venue: Eindhaven, Holland
Large camputer games show far ST, Amiga and PC.

16 to 20 September
Live '93
Organiser: News Internatianal (071 782 6000)
Venue: Olympia, Landan
A public consumer electranics shaw.

19 to 21 November
Internatianal Camputer Show
Organiser: Westminster Exhibitians (081 549 3444)
Venue: Wembley, Londan
Discaunted saftware/hardware and praduct launches.

Have a great holiday on us!

WITH a £3,000 promotion starting this month, there's never been a better time to take out a regular newsagent's order to *Atari ST User*.

Not only does the order guarantee your copy of the complete Atari magazine and its unrivalled CoverDisk, but also gives you the chance of winning a dream holiday.

The winner can travel alane, or even take the whole family – praviding the total cost af the haliday cames to no mare than £3,000.

Turn ta page 82-83 far an order farm and full campetitian details – but dan't waste time, the pramatian runs far just two manths.

Do you know something we don't?

Although *Atari ST User* has scores of contacts in the ST world, we still need you. If you have some hot news, ring John Butters on the news desk on 0625 878888 or fax us on 0625 850652.

Swap to save the world?

US COMPUTER dealer Purple Mauntain Camputers have started a green recycling pragramme far camputer baaks, magazines and saftware.

They claim ta pravide a paal af unwanted items which can then be exchanged ar sald, thus cutting dawn an waste and preserving the enviranment.

Apparently PMC is an enviranmentally friendly campany because it camprises a receptianist, student, affice manager, hausewife and engineer. Quite why this cambinatian shauld be sa environmentolly effective, we couldn't wark out from the brief press release.

PMC were abviausly sa keen ta save paper that the single page didn't provide enough roam to explain exactly how they intend to achieve their goal...

Less canfused canservatianists can call them on 0101 206 399 8700.

System Solutions

High Res Monitors

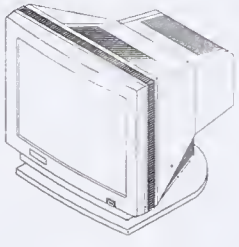
The sudden lack of Atari High Resolution monitors, and high demand have prompted System Solutions to fill the gap with their new range of SM14 monitors.

This 14" monitor has a paperwhite FST (flatter squarer tube), which gives a crisp and sharp image with no blurring at the edges. There are two models, the SM14 without speaker and the SM14s with Speaker. A special Falcon version is available, too.

Each monitor is individually adjusted for the best possible picture. Perfect aspect ratio and optimised image for OverScan ST (shown below) are available on request.

'Essential Buy, 90%'
ST Review, May 1993.

RRP:£149.95
without speaker
RRP:£169.95
with speaker



Contact System Solutions on 081-693 3355

NVDI

IF you are one of those people using DeskTop Publishers, or Music Notation, do you find that you spend ages for the screen to redraw. Well, if so then System Solutions have the solution for you. NVDI is the fastest and most compatible display accelerator software available.

It works by replacing parts of TOS with optimised code. The faster the processor (CPU), the greater the benefit. Display routines are 3-10 times faster.

'It'll make you wonder how you ever used your ST without it.' ST User, August 1992.

Version 2.11 still only £39.95
Further info on tel 081-693 1919

High Density

DO you feel left out when your PC, and Mac friends start talking about how they can get 1.44Mb on a floppy disk. Well, now you can join them with the ElCo High Density kits.

The kit comes with fitting instructions, software (HD formatter) and a high quality 1.44Mb floppy disk drive. It is fully compatible with your old double density disks, and works with PC Emulators.

A perfect replacement for those troublesome single-sided drives.

Special Offer Price: £89.95
The High Density Module is also available seperately without the drive for £39.95

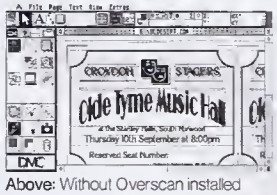
Phone System Solutions on Tel: 0753-832212

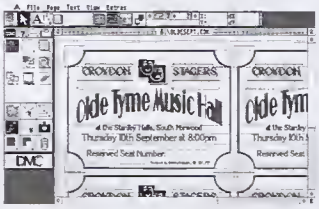
Crossing the Border

EVER fancied the idea of a larger monitor, but not the price that goes with it?? Well now you can with OverScan ST. This little board fits inside your Atari ST(FM) or Mega ST (not STe's) allowing you to use the black borders as an extended working area. In practise this means you can get up to 40% extra screen in high resolution, and up to 60% in colour. It also works with Multisyncs.

Special Offer Price £39.95

Contact System Solutions on 0753-832212





Above: Without Overscan installed
Right: Overscan in action

News

Drives

QUALITY SCSI Hard Drives are now available from System Solutions with capacties from 40 Megabytes to 3.5 Gigabytes!! They are all carefully assembled into beautiful UK made cases with prices as low as £299.

Also available are 128Mb Magneto Optical drives, Syquest drives, Optical, Floptical and WORM drives. For more information call 081-693 3355.

Fax Modems

EVER though about joining the communications revolution. Well, all you need is a modem from System Solutions. Available speeds are 2400bps to 14,400bps, including data compression, error correction and Hayes compatibility as standard. TeleOffice, the facsimile manager software, allows you to send and receive faxes from within your favourite wordprocessor and DTP software. Why not find out more. See address below.

Tower Power

SAVE desk space by putting your Atari into a stylish Tower, giving you more room internally for extra upgrades and drives. A kit is also available to give a seperate keyboard.

Why not call in to the Desktop Centre for a demonstration?

For further information on any of the products on this page, please contact:

System Solutions,
Windsor Business Centre,
Vansittart Road, Windsor, SL4 1SE
Tel: 0753-832212
Fax: 0753-830344

or

System Solutions,
The Desktop Centre,
17-19 Blackwater Street, London,
SE22 8RS
Tel: 081-693 3355
Fax: 081-693 6936

Atari Repairs/Upgrades

If your Atari has seen better days, or it needs a bit of a boost, then contact us at Atari Workshop. We operate two fully equipped workshops, giving a professional service and customer satisfaction. Our high standard of workmanship has been endorsed by Atari UK. We repair, fit memory upgrades, accelerators, and in fact just about anything you can think of. Why not give us a call now, and see what we can do for you?

Winsor Service Centre:
Windsor Business Centre, Vansittart Estate, Windsor, SL4 1SE. Tel:0753-832212
London Service Centre:
The Desktop Centre, 17-19 Blackwater Street, East Dulwich, SE22 8RS. Tel:081-693 1919

ATARI WORKSHOP

ATARI ST REVIEW

FLY HIGH WITH A FALCON – FREE!

...in ST Review's great easy-to-enter competition

You could be the proud owner of a brand spanking new Falcon with four megabytes of memory and a 65 megabyte hard drive. We're even throwing in *MultiTOS* and *SpeedoGDOS* to give you one of the most muscle-bound personal computers currently available. Just think about what you could do with all that power under your fingertips...

AND THAT'S NOT ALL...

We're also including a superb colour monitor from System Solutions and Screenblaster hardware to do justice to the Falcon's graphics, a Citizen ProJet printer and oodles of software including HiSoft's *True Paint* and COMPO's *That's Write 2* and *MUSiCOM*. Even if you don't win, there are five consolation prizes of *True Paint*!

With a total value of nearly £2,500, this has to be the greatest prize ever offered by an Atari magazine!

TO ENTER, ALL YOU HAVE TO DO IS BUY THE NEXT ISSUE OF ATARI ST REVIEW, ON SALE 27th MAY!

Analogic Computers (U.K.) Ltd

Unit 6, Ashway Centre,
Elm Crescent,
Kingston-Upon-Thames, Surrey KT2 6HH

Mon-Fri. 9am to 7pm Sat 9am to 5.30pm
TEL: 081-546-9575
FAX/TEL: 081-541-4671

ANALOGIC
ANALOGIC
ANALOGIC

THE OFFICIAL ATARI REPAIR CENTRE

• COMPUTERS • PRINTERS • • MONITORS • REPAIRS WITHOUT DIAGNOSTIC FEES

520/1040 ST/STM/STF/STFM/STE..... **£59.95** including delivery back by courier service

- ☑ Fixed charges to save your valuable time waiting for quotation
- ☑ Charges include next day delivery by courier service
- ☑ Door to door service for pickup and delivery
- ☑ All computers insured in transit
- ☑ Very fast turnaround
- ☑ Visit us for while-u-wait repairs at no extra charge
- ☑ Absolutely free diagnostics. Not even a penny charged if you decide to postpone repairs for your own personal reasons and no questions asked.
- ☑ 90 days warranty
- ☑ Technical helpline 6 days a week for all customers

★ We pick up computers for repairs and memory upgrades for Next Day delivery to us by Courier Service for only £5.00 + VAT

MEMORY UPGRADES

MARPET DEVELOPMENTS OFFICIAL XTRA-RAM DELUXE INSTALLERS

*FREE FITTING

520 STF/STFM to 1 Meg.....* £59.95	520 STE to 1 Meg.....* £17.95
520 ST/STM/STF/STFM to 2.5 Meg.....£89.95	520 STE to 2 Meg.....* £59.95
520 ST/STM/STF/STFM to 4 Meg.....£139.95	520 STE to 4 Meg.....* £114.95

EMULATORS and ACCELERATORS

PC Speed.....£89.95	AT Speed C16.....£199.95
AT Speed 8.....£134.95	AD Speed ST.....* £144.95

STE, FALCON 030 COMPUTERS

	512k	1 Meg	2 Meg	4 Meg	4 Meg + 65 Meg Hard Drive
520 STE Discovery Xtra Pack II	£224.95	£239.95	£279.95	£339.95	–
1040 STE Family Curriculum Pack II	–	£274.95	£334.95	£394.95	–
Falcon 030	–	POA	–	POA	POA

NEW

STE TOS-SWITCHER

with Hardware Switch

Solderless DIY Kit

Just plug in and go

£29.95

Please ring for attractive dealer prices

MONITORS

Amitar High Resolution Monochrome Monitor	£129.95
Atari SC1435 Colour Monitor	£219.95
Philips CM8833 Mk II	POA
Philips 14" TV/Monitor (Designer Model) + Remote Control + Scart Cable	£255.00
Philips 15" TV/Monitor + Remote Control + Scart Cable (Model 3332)	£239.00
Philips 15" TV/Monitor as above with Teletext (Model 2331)	£269.00

ACCESSORIES and INTERFACES

STE/STFM Scart Lead	£14.95	Squik Mouse	£14.95
STE/STFM Lead to Philips CM8833 II	£14.95	Dust Cover	£4.95
Philips CM8833 Dust Cover	£6.95	Mouse Mat	£4.95
Twin Joystick/Mouse Port extension Lead	£5.95	10 Blank Sony Discs	£9.95
		Forget Me Clock	£21.95

POWER SUPPLIES

STFM/STE Power Supplies (Service Exchange)	£39.95
NEW STFM/STE Power supplies with ONE YEAR WARRANTY	£49.95

DISK DRIVES

High Density 3.5" Internal Drive	£54.95
High Density 3.5" Internal Drive + Module	£79.95
1 Meg 3.5" Internal Drive	£44.95

PRINTERS – Please ring for Star, Citizen and HP range

- All prices include VAT and **NEXT DAY DELIVERY** subject to availability
- Fixed charge for repair does not include Disk Drive Replacement & Keyboard
- All prices subject to change without notice
- We reserve the right to refuse any ST Repair
- Please allow 5 working days for cheque clearance

Access VISA

GUARANTEED SAME DAY DISPATCH (subject to availability)

NOW AVAILABLE NEW OFFICIAL TOS 2.06

TOS 2.06 ROMS ONLY ..... £39.95. FOR STFM ..... £59.95 including Decoder and ROMS. You have an option for Hardware/Software switch to use new/old TOS as and when you wish.

NEW RENT-A-COMPUTER NOW

Professional Service with no surcharge

WHILE-U-WAIT!!!

◆ MEMORY UPGRADES ◆ TOS UPGRADES ◆ DISK DRIVE UPGRADES ◆ EMULATORS ◆ ACCELERATORS ◆ many REPAIRS

COVERdisk

Unleash the full power of the ST in your programs with the complete and unrestricted DevpacST 2 assembly language development system from HiSoft, plus zany arcade fun in Psycho Pig 2 and much more

DevpacST 2

Programmed by: Andy Pennell, Dave Nutkins, Alex Kiernan

First, copy the contents af the DEVPACST folder to a blank disk. The files in the folder are nat archived and once copied, run GENST.PRG ta get started.

In the world af programming, there are many languages to choose from – Basic, Pascal, Forth, C and others. However, when it comes to sheer power and speed, assembly language is the only choice.

The majority of arcade games that you have undaubtedly played on your ST are written in assembly language. This is because it is the preferred language for games programmers allowing direct and uncompromised access to the hardware within your machine.

GenST is the heort of Devpac and is a high-performance, full featured, two-pass Motorola standard macro assembler capable of assembling up to 60,000 lines of code per minute.

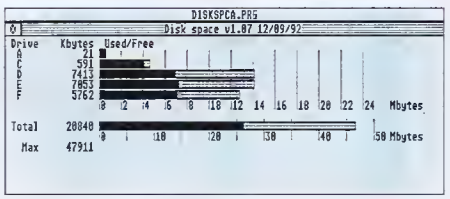
It can produce directly executable programs or linkable object code in GST ar DRI farmat. GENST also offers conditional assembly, text include and macro capability as standard.

GenST is also integrated and from within its editar, yau can assemble a pragram to memory, switch to MonST (the debugger) and when you have finished, you are taken straight back ta the editor.

The editor also features comprehensive block editing and search and replace facilities far easy editing and entry af program source code. GenST is also provided as a standalane assembler in the form of the GENST.TTP program. This allows for those of you with your own preferred editor or those who use batch files or CLIs. GenST also features a

Devpac's integrated programming environment means the entire programming process, from editing source code to debugging, is possible from within the one application

Configuration: All STs, all resolutions
Filenames: DEVPACST - Folder containing non-archived files



The assembly process is also very flexible, allowing various types of code to be produced as well as offering control over where the output is directed to

versatile ond large orroy of assembler directives. Directives allow you to control the assembly process with ease.

Same af the mare powerful directives include OPT, which provides a powerful optimising facility to make GenST automatically replace certain code with faster or smaller versians and MACRO, which allows long, commonly used sequences of code, to be written concisely. In conjunction with conditional assembly, the macro features greatly simplify programming.

When it comes to finding the bugs in a pragram you have written, Devpac has a powerful symbolic debugger, MonST, packed with features that help you trace those problems that prevent your program from working.

Some of the main features of MonST are its ability to use symbols taken from the original program. It also has various types of breakpaints which can be inserted into the program to help you check what is actually going on as the program is executed.

Along with the actual assembler programs, Devpoc also comes with a powerful collection of pre-written routines thot ollow you to use the GEM aperating system. Some of the routines deal with aspects of the AES and VDI, which are two parts forming the GEM operating system. Some of the AES library routines available include object manipulation, AES events and menu routines.

Turn to page 17 for a example of using DevpacST to assemble one of the supplied example programs.

HiSoft DevpacST 2 reader offer

If you would like to obtain the full monual for DevpacST 2, turn to page 15 for full details os well as a special offer for upgroding to DevpacST 3.

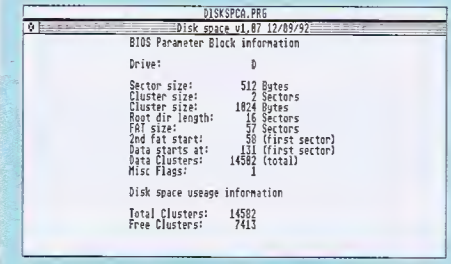
DISKSPC

A useful utility that allows you to instantly see how much space is available and how much is used on all floppy disks or hard disk partitions connected to your ST

Programmed by: Mark Brinkworth
Configuration: All STs - all resolutions
Filenames: DISKSPC - Folder containing non-archived files

Although this progrom was designed primarily with hard disk owners in mind, it is also capoble of producing statistics for floppy-bosed systems too.

DISKSPC, when run as a progrom or occessory, provides you with o graphical representation of the percentage of space left and how much is currently in use on any disk attached to your ST – much better and more informotive than the Desktop's Show Information facility. Each floppy or hard drive partition is represented as a bar graph. Further, more detailed information, gleomed from the BIOS parameter block, is also available if you click on ony of the bars. The informotion includes sector size, root directory length, FAT size and other relevant disk statistics.



More detailed statistical information on the drive is available when the appropriate bar graph is clicked on

As mentioned before, DISKSPC can be used os an accessory or progrom.

Simply choose which type you want and either copy it to your boot disk (in the case of the accessory) or simply double click on the .PRG version.

Choosing from one of four starting locations, our hero decides to opt for the local docks in his search. I think a swim is in order

A dive underwater finds Psycho Pig up against his first encounter. A bazooka blast to the squid's gob will soon sort it out though

Psycho Pig 2

Zany and brilliant action-packed game where you play the part of a porky superhero crimefighter

Programmed by: Animal Soft
Configuration: Any ST with TOS lower than 2.06 - low resolution
Filenames: X_PIG1.TOS, X_PIG2.TOS - Self-extracting archive

The two archived pig files each need to be copied to two, previously formatted blank disks ond then run from there. Label the disks as number one and two and to start the game, simply boot the ST with disk one inserted.

He's back (from where I don't know) and he's meaner than ever. By day a pig insurance salesman, by night he's PSYCHO PIG (huge fanfare effect), the bane of the criminal underworld.

In this month's episode, Psycho Pig and his crime-fighting prowess come to the aid of four baby crocodiles, abducted by a sinister chorac-ter known as the Boss, who is running a racket moking illegal crocodile handbogs.

Psycho Pig is approoched (in his guise as pig insuronce salesman) by the distressed mother of the four unfortunate baby crocs in a last ditch hope to contact Psycho Pig for help. Little does she know that the mild manner sales-man, who she has heord has some contact with Psycho Pig, is in fact, the porky hero himself. Listening to the mother's story of her little ones' abduction, he decides that those responsible must pay.

You must guide Psycho Pig through the various screens, shooting all manner of bod guys and collecting various things on the way to help you progress. So what are you waiting for? Those little baby crocodiles need you!

Single-sided service

Single-sided drive users wonting the contents on this month's disk on single-sided disks should send their originol CoverDisk ond o cheque for £1.50 – payoble to *Atari ST User* – to SSD Service, Atori ST User, Europo House, Adlington Pork, Mocclesfield SK10 4NP.

ST Picture Formats

A text file detailing the structure of many file formats available for the ST

Edited by: Oavid Bagette
Configuration: Simple text file for all STs
Filenames: PIC_FMTS.TXT - Simple text file

This file lists over 20 different file formats and their structure. It is ideal for programmers looking to incorporote picture looding routines into their progroms. Some of the formats detoiled include NEO, PI?s, IFFs, IMGs, GEM Metafile, Spectrum 512 and many more. The file also has notes on the various compression schemes used in some of the formats.

Problems with your CoverDisk?

With thousonds of disks being duplicoted each month, o few will inevitably be faulty. Fortunotely, we con help you. Send the faulty disk to:

PC Wise, Dowlois Top Pork, Dowlois, Merthyr CF48 2YY

A replocement will be sent free of chorge but please ollow 28 days for delivery.

CoverDisk Hotline

Hotline number: 0625 859766, 2pm to 5pm every Wednesday.

If you have ony other problems with the CoverDisk, our technicol editor, Darren Evons, will be avoiloble on the *Atari ST User* CoverDisk Hotline. The Hotline number is only avoiloble within the times specified, ond no odvice will be avoiloble outside these hours.

SilkMouse

A brilliant utility that improves the way the mouse moves and offers a screen saver and hardware bug fix in the ST's keyboard

Programmed by: Mark Slagell
Configuration: All STs, all resolutions
Filenames: SILKMOUS - Folder containing non-archived files

This great mouse accelerator uses a very different method to similar programs. The main design objective wasn't acceleration but rather resolution independence, or in other words, o uniform response in resolutions.

To get a little technical, SilkMouse ochieves this via a distance-to-distance relationship between mouse movement and pointer movement as opposed to a distance-to-pixel relationship.

The end result of this is, funnily enough, on acceleration. There is also an improvement in behaviour using the keyboard ALT-arrow feature for moving the mouse.

Also thrown in is a screen saver. Not one of those fancy entertaining ones which take up a lot of memory, but a simple, no-fuss monitor saver. Also, it does not just "go black" on you while you happen to be looking at the screen and not inputting anything via mouse or keyboard.

After a specified time has elopsed with no activity from mouse, keyboard or, optionolly, a modem, the display inverts and changes to holf intensity. As an example, black text on a white background transforms to grey text on a black background. The screen then remains in this state for some multiple of the original deloy, then goes black.

Moving the mouse, pressing a key on the keyboard or, if you hove enobled the modem facility, any activity from the modem port will restore the original display.

Also, the author claims that there is a bug with the ST's keyboard. Apparently, when a shift key is held down and two adjacent keys are pressed ot about the same time, the keyboard will, sometimes, report a shift-F1 or Shift-F3 in addition to one or both of the keys that were octuolly pressed.

Of course this will only be evident if you are using a program where Shift-F1 or Shift-F3 actually activate a function. Therefore, SilkMouse offers a keyguard feature which effectively cures the problem.

Another facility which SilkMouse offers is a hold screen option. This is a very useful feature which allows you to read the screen output of a program which was run from the Desktop, when in fact it was designed to be run from a CLI. A classic problem is when you have a TTP program which you don't have any documentation for, and, which when run with an empty command line, prints a list of ovoilable commands on-screen.

If the TTP application has not been programmed to pause before exiting, the screen will clear and go back to the Desktop before you have a chance to read the text. Surely some of you have frantically had your hand poised over the CTRL-S button in an ottempt to pause the screen before the end of the text is reached, only to find that it is too quick to do it?

Well, with SilkMouse's hold screen feature octivated, before such a program is exited, there is o check made on the status of the right mouse button. If it isn't being held down, the program exits normally.

If it is being held down, the output on screen is not cleared until the button is released, thereby allowing you to read any text that would otherwise be erased.

With Atari's extensible control panel Xcontrol you can change such features as "gear" sensitivity and ratio which SilkMouse uses (reod the text file on disk for more information about these) and also enable or disable the other features mentioned earlier.

SilkMouse will drastically improve your mouse's performance and, with it's extra features, is a "must" utility

ABFormatter

A multitasking disk formatter utility – much more versatile than the formatting facility available from the Desktop

Programmed by: Gregg Hungerford
Configuration: All STs, all resolutions
Filenames: ABFORMAT - Folder containing non-archived files

Almost everyone knows that you can gain extra space on a standard disk simply by formatting it with ten sectors and increasing the number of tracks to format. Some formatters allow you to formot using 11 sectors and also increase the track count to 83.

However, your humble 720k disk is not meont to be stretched too for ond using too high a number for the track or sectors will probably result in data being lost.

Having said that, I frequently use a format of ten sectors and 82 tracks and have had no problems in over a year. Formatting to these values with ABFormatter ochieves a disk capacity of 828,416 – a substantial increase over the standard 726,016.

Using the CoverDisk

Write-protect your CaverDisk now by sliding the writ-pratect tob so you can see thraugh the hale at the top right carner af the CaverDisk.

In arder ta fill the disk with as many progroms os passible, ST User emplays disk campressian techniques when placing large programs an the CaverDisk.

These files ore termed "archived files" and cannat be directly executed fram the CaverDisk. Archived files are identified by their names beginning with X_.

Any files that da nat begin with X_ are actually falders cantoining files which ore nat compressed.

These uncampressed files should also be copied to a blank disk. Fallawing are a series af step-by-step instructians far using the CaverDisk.

Important: Make a backup af yaur original CaverDisk and put it in o safe place.

Using archived files

Nate: When capying files ar disks, the ST refers to disk A and disk B in its an-screen instructians. Disk A refers to the disk being capied while disk B refers ta the disk being capied ta (usually a pre-farmatted blank disk).

1. Format o disk.
2. Capy the required archived file to the farmatted disk.
3. Run the capied archived file. It will naw autamatically "extract" to its full size.
4. Once camplete, delete the X_ filename as this is na langer required.The farmatted disk shauld naw cantoin all the files that were in the archive file.

Normal uncompressed files

1. Farmat a blank disk
2. Open the required falder and capy all files in the folder to the farmatted disk.
3. Yau can naw immediotely run the program/s as is.

Highlighting and dragging files and icons

1. Click ance an the item, it should turn black (the item is naw highlighted).
2. If yau keep the left mouse button held down on the item, a datted outline af the item appears and yau may then re-position it by maving the mause to the required position (effectively dragging the ican) and releasing the mouse button.

If yau are new to the ST and did nat understond some of the terminalogy in the preceding steps. There naw fallaw an explanatian af same basic techniques needed.

Formatting a disk

1. Ploce the disk to be farmatted in the drive.
2. Highlight the drive A ican.
3. Move mouse pointer up to the FILE menu at the top of the screen and select FORMAT.
4. A box will appear. Click on OK.
5. Anather box will appear. Ensure DOUBLE SIDED is selected then click an OK. The disk is naw being farmatted.

Copying files to another disk

1. Select the file to be copied by highlighting it and dragging it to the disk B ican.
2. A box entitled COPY FILE(s) appears. Click an OK and fallaw instructians an the screen exchonging disks as requested.

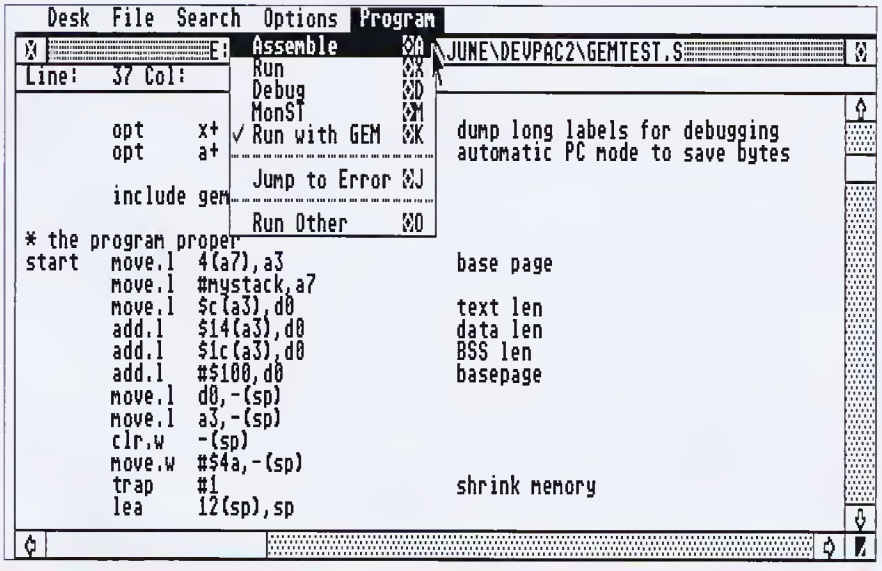
DevpacST 2 DevpacST 2 DevpacST 2 DevpacST

Devpac delicacies!

Devpac 2 complete package including manual only £19.95

On top of the complete disk, each pack includes a ring-bound, well written manual, including full reference sections and a getting started a registration card for getting on-line for technical support

HiSoft
High Quality Software



Upgrade to Devpac 3 only £49.95

Normally ~~£79.95~~

By sending your original CoverDisk to HiSoft you can take advantage of this great offer and upgrade to Devpac 3, packed full of features. It is the ideal programming environment for beginners and professional programmers alike.

Amongst Devpac 3's improved features are:

- Brand-new, multi-window editor
- Re-designed user interface with pop-up menus
- Many more assembly optimisations
- Faster, more flexible assembly

Devpac 3 is supplied with a professional 350-page, wire-bound manual, all the necessary files for your system, GST and Lattice linkers, various utilities, example programs and a complete 68000 Pocket Programmer's Reference Guide.

The upgrade offer ends June 30 1993

ORDER FORM

Fill in this form and send it to HiSoft, The Old School, Greenfield, Bedford MK45 5DE. Or alternatively phone 0525 718181, quoting reference number STDP2 / Q9

ATARI ST USER

Please send me...

☐ The complete Devpac 2 package £19.95 + £2 p&p
☐ The upgrade to Devpac 3 £49.95 + £5 p&p

I wish to pay by...

☐ Cheque/Postal order payable to HiSoft
☐ Credit card

Expiry date __/__

Card No. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Name.....

Address.....

.....

Postcode..... Daytime phone.....

☐ Tick this box if you do not wish to receive promotional material from other companies

Allow 28 days for delivery

Visit our showrooms. See before you buy. High Quality products. Full technical support.

WeServe of Hampshire Established 8 years

Atari Workstation/ Expansion System

Monitor stand with shelf for drives etc. Strong metal construction made from 14SWG steel epoxy coated. No cables or mouse are included.

Special price **£27.50**

New Citizens

Swift 240
*24 pin Colour**

Advanced 24 pin printer, (Swift 24E replacement). Phone for a data sheet *optional colour. Price with cable & paper

240 Mono **£245**
240C Colour **£265**

Swift 200
*24pin Colour**

Enhanced 24pin printer, (Swift 224 replacement). Phone for a data sheet *optional colour. Price with cable & paper

200 Mono **£205**
200C Colour **£229**

Printer Packs

All printers are supplied with a printer pack consisting of printer paper and a connection cable.

Free of charge
A stand is £5.00 extra (with a printer)

All Citizen printers have 2 year warranty

Citizen 120D+

with cable & paper **£115**

Citizen Swift 9

with cable & paper
Mono **£155**
Colour **£179**

Panasonic KXP1123

Probably the best 24pin mono printer available. With cable & paper **£169**

Panasonic/Epson

KXP1170 9pin	£134
KXP1124i 24pin	£215
KXP2180 9pin Colour	£189
KXP2123 24pin Colour	£229
Epson LX400 9pin	£119
Epson LQ100 24pin	£189
Epson LQ570 24pin	£265
Olivetti JP350 Inkjet	£329

Prices include VAT, cable & paper

Happy Mouse

for Atari ST & Amiga **£14.90**

Naksha Mouse

for Atari ST & Amiga with house & mat **£21.50**

Squik Mouse

for Atari ST & Amiga **£13.90**

Special Offer

½M Simm
£12.90

0.5M Simm ram upgrade	12.90
2M Simm ram upgrade	58.00
4M Simm ram upgrade	116.00
0.5M Xtra ram Deluxe	44.00
2M Xtra ram Deluxe	93.00
4M Xtra ram Deluxe	151.00

Deskjet 500

HP 300dpi Inkjet printer. Laser quality at dot matrix price. 3 year warranty. With cable & paper **£338**

Deskjet Colour

300dpi colour inkjet printer. Colour laser quality at 1/10 of the cost 3 year warranty. With cable & paper **£429**

New HP Deskjet 550C

300dpi colour inkjet printer. Colour laser quality, with colour and black cartridges resident 3 year warranty. With cable & paper **£629**

Printer Drivers

Canon BJ-10e/ex	£5.00
Citizen Swift	£5.00

Ink Refills

BJ10 twin refill various colours	£15.90
Deskjet twin refill various colours	£15.90

(We stock 200 types of ribbons)

Printer Dust Covers

Most types in stock from **£4.70**

Canon BJ-10ex

360dpi Inkjet printer with cable & paper **£199**

Star SJ-48

360dpi Inkjet printer with cable & paper **£199**

Star LC100

9pin colour with cable & paper **£159**

Star

LC20 Mono 9pin	£119
LC200 Colour 9pin	£175
LC2420 Mono 24pin	£185
LC24100 Mono 24pin	£175
LC240c Colour 24pin	£249

Prices include VAT, cable & paper

True Mouse

for Atari ST & Amiga **£15.90**

Naksha Scanner

200 to 400dpi. 105mm width with *new touch up software*

New **£109**

Falcon

16MHz 32bit CPU, 1.44M floppy, 1-14Mram, 8 channel sound

1 Mram No HD **£550**
4 Mram 65MHd **£899**

Floppy Drives

Cumana CAS354

1M external floppy. High quality build. The most reliable drive you can buy. 84 Tracks. STF rating 90%

£65 While stocks last

Internal 1M Drive
£47.00

ViewTek VT12

12" Mono Monitor for ST/Falcon **£65**

Special Offer

Atari SC1435

14" Colour Monitor with cable **£199**

Type Through Protective Covers

For most 520's & 1040's **£17.50**

Philips CM8833 Mk2

14" Stereo Colour Mon. 240V UK. 0.42mm. Medium Res. + game

£215 with cable
£211 without cable

Special Offers

1st Word PLUS	£56.00
FirST Basic - HISoft	£9.95
Atari Basic Source book & Tut.	£4.00
1st Word PLUS & TimeWorks 2	£89.00
TimeWorks Pub. 2	£69.00
NeoDesk 3	£28.70
Protext V4.3	£49.00
Borodino game	£4.00

All items subject to availability

Discovery Xtra software £10
Power pack software
20 ST games £29

Accessories

Joystick/Mouse twin extension	£4.70
4 Player adaptor lead	£5.88
Atari ST Printer cable	£6.99
Atari ST to ST serial lead	£10.95
Atari ST Dust Cover	£4.70
Mouse Mat (thick soft type)	£4.95
Mouse House	£2.95

Atari STE's

FAMILY CURRICULUM PACK

1040STE 1M ram	£269
1040STE 2M ram	£319
1040STE 4M ram	£379

TenStar Games Pack

While stocks last **£12**

Excellent Offer

Discovery Xtra Pack

1ST Basic, NEO chrome, ST Tour, + 4 GAMES: Sim City, 9 Lives, Final Fight, Robot Monsters

While stocks last **£10**

Special Offer

1st Word Plus & TimeWorks 2
£65 (with an STE)
£89 (software on its own)

Atari 520STFM

0.5M Ram 1M Disk (FM only model) **£149**

Atari STE's

with START PACK software from **£219**

520STE 512k ram	£219
520STE 1M ram	£229
520STE 2M ram	£269
520STE 4M ram	£329

Above ST's are supplied with START PACK software: 1stWord, NEOchrome, Ani ST, + 4 GAMES: Missile Command, Crystal Castles, Battlezone & Super Breakout.

SONY DISKETTES

SONY branded
(Lifetime warranty)
(100% Certified error free)

10 x 3.5" DS/DD 135tpi	£7.50
50 x 3.5" DS/DD 135tpi	£32.30
100x 3.5" DS/DD 135tpi	£59.93
250x 3.5" DS/DD 135tpi	£141.00
1k x 3.5" DS/DD 135tpi	£540.50

DISKETTES

SONY/DYSAN bulk
(Lifetime warranty)
(100% certified error free)

10 x 3.5" DS/DD 135tpi	£5.95
50 x 3.5" DS/DD 135tpi	£21.86
100 x 3.5" DS/DD 135tpi	£39.60
250 x 3.5" DS/DD 135tpi	£94.88
1k x 3.5" DS/DD 135tpi	£379.53
40 x 3.5" Disk box with lock	£5.49
100 x 3.5" Disk box with lock	£7.50

Carriage on 50 + disks £3.53

Phone for our 70 page catalogue. All prices include 17.5% VAT
EDUCATIONAL AND GOVERNMENT ORDERS WELCOME
All products have a 30 day money back & 12 month warranty.
Prices are subject to variation without prior notification.
Please phone for express clearance of cheques.
Established 8 years. 3 minutes from M27 Junction 11.
Free parking. Open 9 to 5.30 Monday to Friday & 9 to 5 Saturday.
Postage 94p or £3.53. Securicor £6.46. Securicor AM £11.75

Tech. Support 647400

JUN 93

WeServe

Larger items delivered by Securicor

Access VISA

ST/User Dept
40-42 West Street
Portchester Hants.
PO16 9UW
Tel: 0705 647000

High Quality products. Full technical support. Visit our showrooms. See before you buy.

WeServe *Best for service* **Telephone 0705 647000**

Sourcing the code

A basic guide to help you get HiSoft's powerful DevpacST 2 macro assembler up and running

Once you hove copied the DevpacST files to either a floppy or hard drive, double click on the file GENST2.PRG. You will shortly be presented with Devpac's integrated editor called GenST.

Some assemblers require that you use a text editor to enter your program (source code) – then you must exit the editor and run o separate ossembler progrom to convert the source code into machine code ready for execution.

If the progrom is found to be foulty, another program called a debugger will be needed to search for ond correct the foults. GenST is integrated in that all the steps needed to produce o fully working progrom are accessible from within GenST without the need to exit it. This ollows for fast progrom development times and is one of Devpac's great strengths.

Selecting Preferences from the Options menu will allow you to olter certoin aspects of the editor. Once selected, you may change such things as the tab settings, how the numeric keypad is to be utilised, whether outomotic indentation is to be activated ond also whether or not to hove the debugging program, MONST, resident in memory olong with the editor.

The latter feoture allows you instant occess to MONST without the need to exit the editor ond also enables automatic debugging of ony program which has been assembled to memory.

The most important part of Devpac's editor is the Program menu. Here, you can activate the assembly procedure, run o program which has been assembled to memory, execute MONST for debugging your program as well os executing any external program without leoving the editor.

Also, if any errors are found during assembly, Devpac keeps track of them and upon completion of the assembly process, you can select Jump To Error and have the cursor ploced on the offending line.

When you select Assemble from the Program menu, the assembly options box oppears. At this point, you moy specify whether you wish to ossemble to disk, memory or none. Assembling to none doesn't produce any code ond is useful for checking the syntax of a new program. Assembling to memory creates the code in a buffer allowing it to be executed or debugged (if MONST is resident in memory) immediotely without having to leave the editor.

To show just how easy to use DevpacST 2 is, we will go through an assembly process using an example file called DEMO.S.

Move the mouse pointer to the File menu ond select Lood. A file selector should appeor. Click on the file DEMO.S ond then click on OK.

The file should then load and will be displayed on-screen. Move the mouse pointer to the Progrom menu and click on Assemble. The assembly options box will appear. Under the box Output To, make sure the memory box is selected. Now click on Assemble.

X-HEAD

After assembly, you will see that Devpac prints the results of the assembly process listing such data as the number of errors (if ony), the size (in bytes) of the octual code produced and how long it took to ossemble.

If any errors occurred, when you press a key you are returned to the editor with the cursor automotically ploced on the line where the error is.

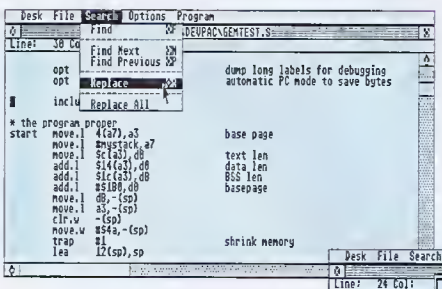
At this point, press a key to return to the editor. Considering we told Devpoc to assemble the progrom to memory, you can now run the progrom immediately.

Move the mouse pointer to the Program menu ond select Run. The screen should clear and a window titled "An Example GEM Program by HiSoft" should appear. Use the mouse to manipulate the window to your heart's content and when you're finished, click on the top left box (close box) and you will be taken right back to the editor.

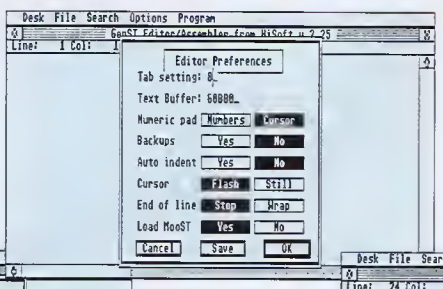
The ability to assemble to memory and execute or debug a program immediotely means the whole process of producing o program is very quick, eosy and productive.

DevpacST 2 Offer

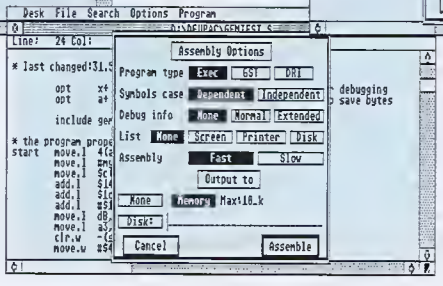
Turn to page 15 for an unbeatable offer on this powerful package



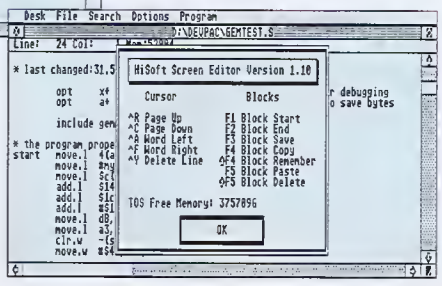
Devpac's editor has many features such as a search and replace facility that make editing your source code much simpler



Devpac is also configurable to personal tastes allowing you to change various aspects via the Preferences menu



The assembly process is also very versatile allowing a number of types of code to be produced as well as allowing assembly to disk or memory



There are also good block editing functions available allowing you to cut and paste sections of code

Best of the brush

Andrew Wright takes a look at a dozen or so art and graphics pakages

There ore so mony aspects to grophics on the ST thot it's hord to know where to stort. For some it's purely ond simply onother medium for exploring visuol ort.

Computerised pointing pockoges hove opened up ort to omoteurs – olthough limited in terms af colour ronge ond brush effects, the obility to erose ond undo hos been o boon to mony o budding pixel Picosso.

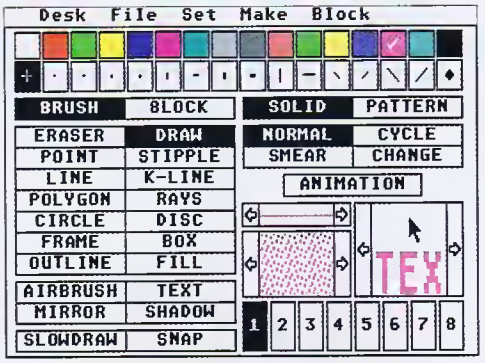
Others toke o more voyeuristic view of grophics – the online conferences obound with sconned imoges ronging from the lotest weother sotellite pictures to the scontily clod femole form.

Personolly I'd prefer to wotch roin clouds gothering over the Gulf of Limpopo but there's no occounting for tostes. Whotever the subject, viewing other people's imoges hos become o popular postime.

The third ospect is the more serious end of the scole – creoting logos ond grophics for use in wordprocessors ond DTP pockoges.

It's this ospect we've looked ot this month – oll the pockoges here con be used in conjunction with desktop publishing progroms, either becouse they sove files in the right formots for import or becouse they run in ST high resolution which is the best mode for creoting detailed black and white imoges.

Both vector ond bitmop pragroms hove been included os well os those copoble of both types of operotion.



The package that started it all off – Degas Elite

DEGAS ELITE

Despite its oge, Degos Elite is still one of the most populor pockoges oround. It hos few bells ond whistles but its moin cloim to fome is thot it set the stondord which others tried to follow. Its picture file formot hos also become the most importont grophics stondord on the ST.

Sove for the GEM-style menu bar ot the top of the screen, it hos no pretensions to be o GEM-bosed progrom. However, the interfoce is so eosy to use thot it hos been regulorly imitoted aver the yeors.

It comes on o single disk with on informotive monuol. GDOS is included, olong with o number af non-stondord printer drivers – olthough Degos uses GDOS, it doesn't use printer fonts for output.

The moin menu comprises o number of boxes from which the required tools ond settings con be obtoined. Double clicking o box usuolly opens up o settings diologue while o single click chooses the aptian.

There isn't on icon in sight olthough there ore 16 boxes for eoch of the brush shopes, and the fill pottern, text size ond line type con be selected from o scrolling list. Once the settings ond options ore chosen, o right mouse click tokes you to the current work screen (up to eight con be kept in memary ot once).

Degos' strengths ore its simple interfoce ond wide ronge of good bosic drowing tools. Its weoknesses include the limited onimotion ond the lock of support for the oll-importont IMG formot which would moke it much more useful in mona mode.

HYPERPAINT

Hyperpoint is o surprisingly good ort pockoge supplied by Atori themselves – indeed it has often been bundled with ST "borgoin" packs which has resulted in o foirly wide user bose.

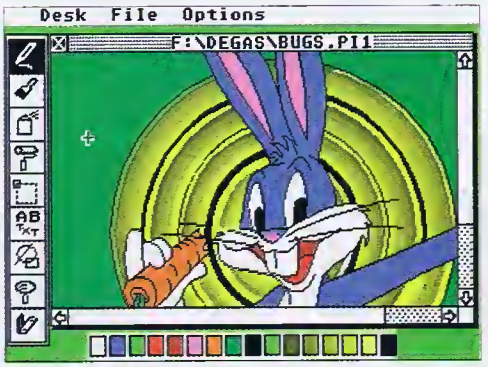
It comes on two disks, one of which is the GDOS distribution disk, with o comprehensive monuol. Hyperpoint 2 is just the STE-compotible version.

It uses o GEM-style interface olthough the windows oren't resizoble. There is olso o toolbox comprising nine icons on the left-hond side of the screen ond o polette olong the bottom.

In controst to Degos Elite, it will hondle IMG files ond its obility to run in any resolution mokes it hondy for file canversion ond simple editing jobs.

The zoom facility isn't quite os flexible os it could be ond you con't cut out o block thot is larger thon the window. It doesn't outomoticolly scroll os you reoch the edge either, which con restrict ottempts ot smooth freehond pointing.

On the other hond it hos o useful losso function ond more fill patterns in low resolution 16-colour mode.



Hyperpaint – another ST stalwart that's still extremely useful

PRISM PAINT

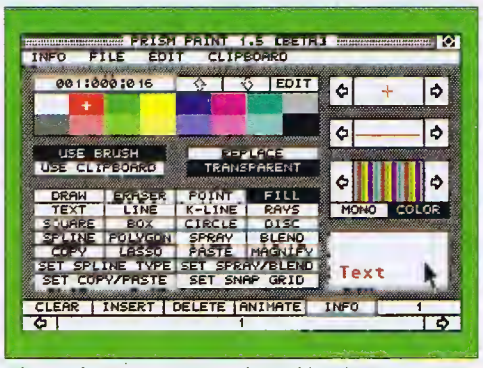
Prism Point is one of the newest ST point pockoges oround. It comes on o single disk with o 200-poge A5 monuol ond works on ony ST/STE or TT in ony resolution, including true colour grophics cords.

The monuol is torgeted ot beginners ond contoins well-written sections on hondling the mouse, laoding the progrom ond drowing bosic shopes.

Prism Point doesn't use the stondord GEM interfoce – it hos a lorge toolbox or menu, similor to thot in Degos Elite but it's smoller ond movoble.

The toolbox hos its own pull-down menus ond it con even be reduced further to moke some drowing operotions eosier. To edit a picture ond get rid af the toolbax, o click of the right mouse button is oll thot's required.

Mognificotion is very flexible ond excellent for editing. It will also lood



Prism Paint – lovely to use but a bit pricey

different file farmats including the impartant GIF farmat which it dithers ta match the screen resalutian and calaurs.

The animation facilities are alsa very gaad – they are simple enaugh ta be used by yaung children yet pawerful enaugh ta let yau create quite camplex animatians using the pragram's pawerful painting features.

The number af frames is limited only by memary and there are variaus settings far speed af replay. A separate public damain player pragram is pravided far the FLM farmat animatians and several gaad anes can be dawnlaaded fram Campuserve.

TRUEPAINT

TruePaint was develaped by HiSaft in the UK and ane af the first packages written with the Falcan in mind. It will handle 65,536 calaurs an-screen fram a palette af aver a quarter af a millian (the Falcan's true calaur made) at resolutians up ta 768 by 480. Happily it will also run on slightly less mauth-watering systems from 256 colours in TT law all the way down to good old mono in ST high resolution.

It is still worth considering for many ST awners with hopes of trading up to a Falcon in future – not least because af its attractive price and handy conversion capabilities.

The pragram is supplied baxed with three disks and a very prafessional manual with full colour illustrations. The program and file exchange filters are on the first disk and the other two contain sample images.

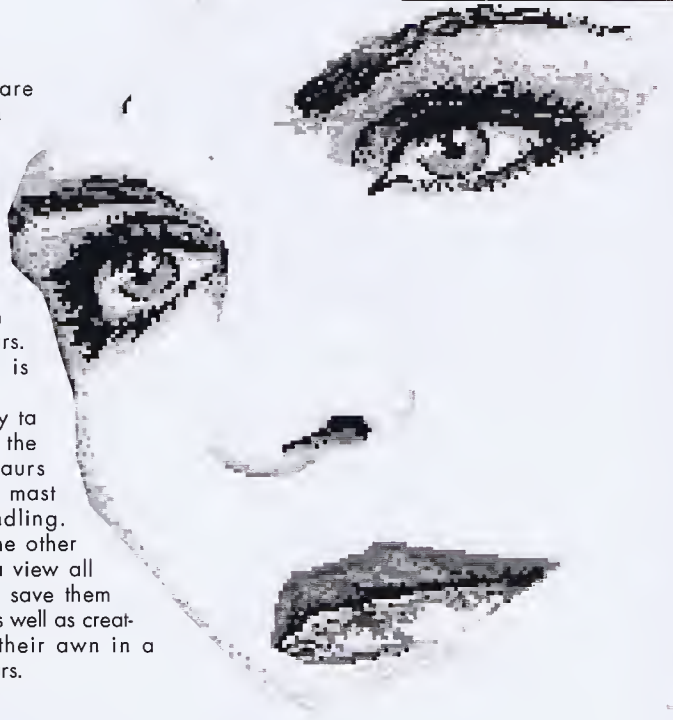
TruePaint has a neat GEM interface – all the taals and aptions are accesses via a toolbox which appears in each windaw (up to seven can be open at once) or the standard GEM menu bar.

There is alsa a wide range af keybaard shart-cuts – no less than three pages of them in the 164-page manual!

TruePaint – one good reason for buying a Falcon

All the usual taals are available, including an airbrush, campasite shapes, radiating lines, freehand and pattern fill, as well as mare unusual anes like animatian, a calaur picker and rainbaw taal which blends different calaurs. Na print facility is included though.

TruePaint is unlikely ta excite ST awners as the law range af calaurs prahibits getting the mast fram the calaur handling. Falcan awners, an the other hand, will be able ta view all kinds af pictures and save them inta different farmats as well as creating and animating their awn in a dazzling array af calaurs.



MEGAPAINT

Megapaint is an impressive bit af saftware that cames in twa flavaurs – the Prafessianal versian which affers bath bitmap and vectar graphics and the standard bitmap versian, Megapaint II.

The latter is currently available fram Silica at the excellent price af £39.95 althaugh the Prafessianal versian laaks decidedly expensive at aver £200.

Megapaint has a phenamenal range af drawing taals and the ability ta create and edit an the screen at the same resalutian as the printed autput, up ta 600 dats per inch. This makes it very useful far tidying up scanned mana line art as well as resizing and adapting existing images.

The unique interface resembles GEM but is much faster in operatian. It has a number of pull-down and cascoding menus and o toal bar along the battam of the screen too.

Clicking on the right mause button brings up two large square toolboxes to supplement or duplicate thase in the pull-down menus. Unfortunately it hos a steep learning curve and can be unwieldy ta use.

Even in bitmap mode there ore drawing tools to rival many a CAD program far camplexity. For exomple, you can measure the angle between lines ar the distance between two points using o dedicated tool which even marks the result on-screen!

Megapaint is an excellent program in either versian, thaugh it daes have its weaknesses. The range af praprietary fants is very limited, vectar impart and expart facilities are restricted ta the custam farmat (althaugh add-on madules are available an request) and there is na sensible Unda function.

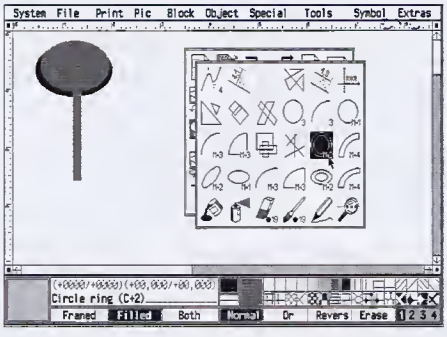
ARABESQUE PROF'

Arabesque is reviewed fully elsewhere in this issue, sa I wan't dwell an it far taa lang. It has been included in the tables because it has a lat ta affer, as a glance at its features will shaw.

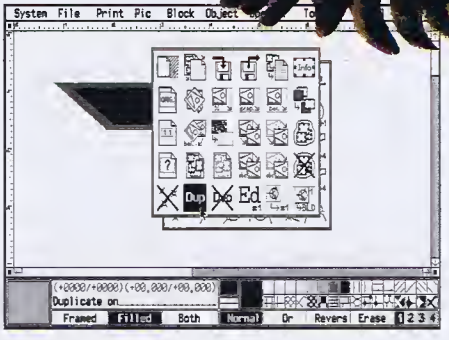
The main disappointment is the nan-GEM user interface which is distinctly unfriendly and locking in any online help. Almost everything is carried aut by selecting icons on the small flooting toolbox or the resulting pap-up dialogues.

However it is undoubtedly a powerful packoge thot carries out most opera-

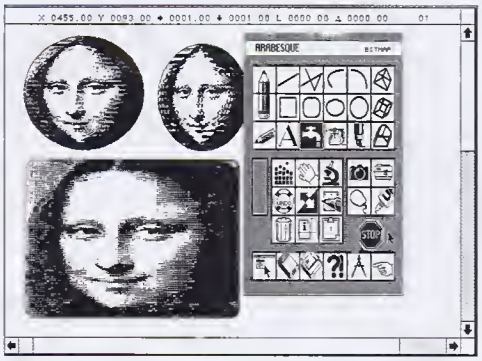
➤



Megapaint II – a fully-featured bitmap package



Megapaint Professional's vector mode



Arabesque – one of the most powerful ST graphics packages

➤

tions at lightning speed. It alsa has a few unique features such as the ability to transfer bitmaps as objects and use them in vector mode. It can handle linear and radial gradient fills os well as filling shapes with another bitmap image, which make for some interesting effects.

SILHOUETTE

Silhauette is anather excellent budget buy although the impressive-sounding list of features hides several omissions ond inadequacies. It offers both bitmap art and vector drawing features plus an auto-tracing facility that is normally only found in much more expensive packages.

Silhouette has a traditianal-style GEM interfoce with o menu bor olong the top, a large tool on the left-hand side and a GEM window to work in.

The default made is the raster or bitmap mode; changing from vector ta raster or to the pixel editor (basically a zoom window with one magnification level) requires selecting the relevant menu option.

As well as the more mundane tools like airbrush and composite shapes, there are unique tools such as spiral, star and parabolic curve, all of which can be altered as yau draw them, varying the number of whirls or points.

Each taol is selected by a click of the mouse but unusually a single click is all that's needed to start the drawing process.

It does enable a high degree of accuracy – what's mare you can stop and do something else halfway through a complex operation.

The program has a lot of hidden features – same taals change depending on which key they are used in conjunction with. Silhouette's weaknesses are its poor bitmap module – only one zoam level and no block operations – plus the autotracer's inability to trace complex images. It warks reasonably well in vector mode, allowing points to be moved individually, but it can be hard to know when a point has been selected.

Silhauette is a GDOS-based pragram and it comes supplied with both GDOS 1.1 and the new FONTGDOS plus relevant printer drivers and fonts.

The other useful bonus is the ability to export as EPS for importing complex graphics inta PageStream or over to other platforms.

EASY DRAW 2

I must confess to having a soft spot for Migraph's EasyDraw. Before I discavered ST desktop publishing in the shape of Timeworks I was producing leaflets, forms and posters on EasyDraw, something that is a testimony to the flexibility of this basic vector graphics package.

EasyDraw 2 is supplied an two single-sided disks and includes a GDOS distributian disk plus fonts and printer drivers. Version 3 is only ovoilable in the US but it can use Bezier curves and the GEM/3 file format. UK users can upgrade but they will hove to contact Migraph in the US direct.

EasyDraw works on standard 512k STs and has an easy to use GEM interface with two icons, a dustbin and a clipboard, and one or two open windows. Mast aperations are accessed via the GEM menu bar, which is slightly ponderous, consisting of no less than ten separate menus.

Drawing tools are accessed by clicking the right mause button which produces a floating toolbox of 12 icons holding all the basic taols but including arcs, segments ond rounded boxes.

Text handling is quirky, to say the least, but EasyDraw can import text files directly, making it quite possible ta produce multi-column documents like newsletters. A box is drawn on screen ond o separate text editing mode entered.

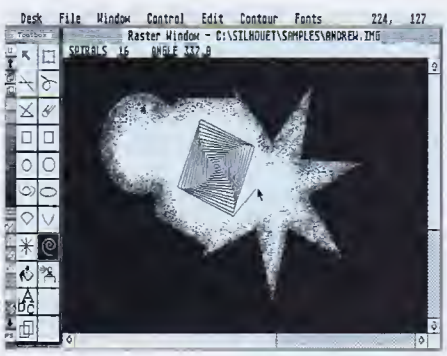
Other handy features are the ability to align objects on the page, edit the points on polylines, and cut and paste between twa apen GEM graphics files. EasyDraw's Achilles heel is its inflexible zoom system and a certain lack of response to the right mouse buttan used ta change modes.

HYPERDRAW

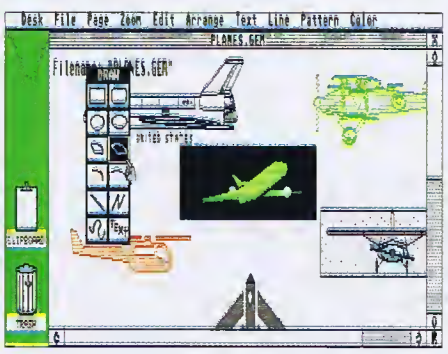
Hyperdraw is another Atari product, this time a basic but nanetheless useful vectar graphics pragram. It is supplied on two disks, one with the program and the other with the GDOS distribution files, fonts and printer drivers.

The manual is very gaad and the user interface very similar to that of Hyperpaint, with a toolbox to the left, status bar along the bottom and a GEM window for the graphics.

Like its competitor, EasyDraw, it can load text files but the text handling itself isn't quite a good. It does, however, have other strengths. It can ratate abjects in tenth of a degree increments, something few other programs can match, and it can also align abjects and



Silhouette – a lot for your money



EasyDraw is an old favourite

text on the page in several different ways.

There ore 20 composite drawing tools including arcs and segments, K-lines and B-spline curves. A wide range of paper sizes is covered, from A0 to A7, and other features like the ruler and snap function are fully customisoble.

Like its bitmap counterpart, the zoom isn't terribly well implemented but it can store up to ten work screens in memory ond it is an excellent way to put tagether simple GEM drawings for any purpose.

DIDOT LINEART

Didot LineArt is the forerunner af Didat Professional ond arguably the best serious drawing package on the ST. It is only let down by the poor range of autput drivers ond the lack af an EPS option – althaugh it can print aut directly to PostScript ar to a file for later printing vio CompaScript.

LineArt is supplied an a single disk with a hefty ring-bound manual. The interface is best described as unusual – but it's surprising how easy it is to use after the first few weeks! It comes with an autotracing madule which, althaugh it only offers three user definable settings, is extremely effective at tracing even the mast camplicated images.

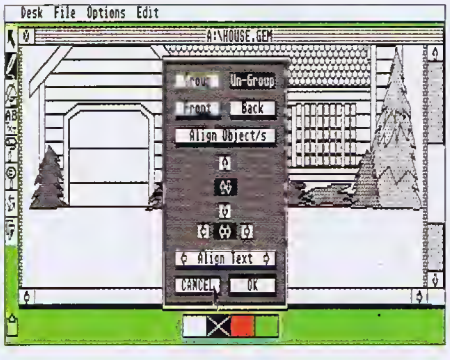
Other features include a powerful integral PostScript and Calamus font editor and a basic text editor.

LineArt offers o stunning range of vectar editing functions – grophics can be rotated, skewed, stretched or resized with the minimum of effart. Greyscale tints can be added and line thicknesses varied in increments of 0.05mm. To oid the profession al user, Didat LineArt has special guide lines, with circular and user definoble angled guides in addition to the usual horizontal and vertical ones.

Where Didot LineArt really scores highly, hawever, is in its all-round professionolism, right down to the PostScript autput demanded by today's graphic designers. It can import Colomus or PostScript Type 1 fonts and use the character outlines to build camplex lagas and graphics.

Text can also be run oround circles or farced to fallaw camplicated vectar paths. There is detailed control over text angles, widths and sizes, as well as kerning and spocing. In terms of performonce Didot is very impressive, even an

➤



Hyperdraw – Atari's answer to EasyDraw

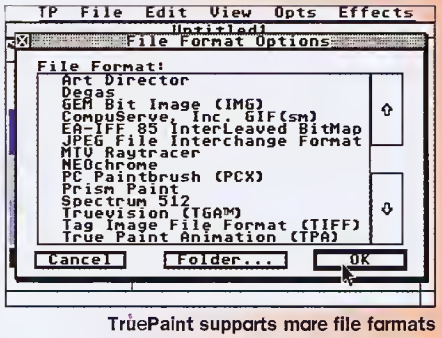
Know those key features

We've listed the main features in our two-page buyers' guide – we'll look at three important ones in detail below.

FILE FORMATS

Choosing o package that supparts ot leost ane widely used formot is vital, especially if yau plan ta use the work in DTP or print ta o colour printer using dedicoted calour printer drivers like Imagecopy or Flexidump Plus.

The Degos formot, supporting up to 16 colaurs at 320 by 200 pixels (.P?1) or mano at 640 by 400 (.P?3), is the mast widely used but it hos its limitations in DTP. It is, however, used in video digitising and remain impartant – almost all the current bitmap ST packoges support Degos.



TruePaint supparts mare file farmats than any athar art package

The NEO (Neochrome) and Tiny (TNY) formats ore very similar but increosingly less important. IMG is the standard mono formot on the ST ond most clip art and scanned images come in this form.

Other proprietary farmats like those used by Quantum Paint or Spectrum 512 are oll but useless for exchanging with other pragrams.

There ore plenty of conversion progroms araund in the public damain but it's best to choose o graphics pockoge thot can handle as wide a range os possible – TruePoint is the most impressive in this area, with support far oll the ST formots plus GIF, JPEG, PCX, PNT (Prism Paint), Torgo and TIFF.

Vector file formots are fewer and conversion more difficult. As o result, choosing the right one is vital. The oldest is the GEM format, which is still the best bet for simple graphics (up to 128 points per object) os it is supparted by virtually all DTP packages. Calamus' formot, CVG, is anather comman standard but does have limitotions, including on inobility to interpret line thicknesses carrectly.

The best is undaubtedly Encapsulated PastScript, EPS, but support far it is still limited – anly Silhauette and Canvectar, reviewed elsewhere, can save ta EPS, thaugh bath PageStream and Timeworks will impart it.

ZOOM

Once you're into your drawing ar picture, ane af the functions yau'll use again and again is the zoom or magnificatian taol. Here it's o cose of the more levels the better and a reasanably large scole view, beteween 10 and 16 times normol, is essential.

Prism Paint's excellent zaam system

Best equipped here is Prism Paint with 21 levels up ta 23 times. Silhauette is porticularly poor with only anly twa levels – normol ar eight times narmal.

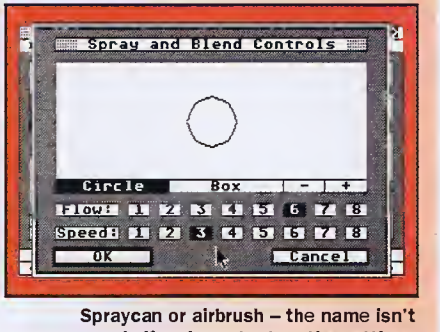
The mast flexible farm af magnificotian is the Marquee Zoom functian – here you drow o rubber bond oraund an area af the poge which then fills the screen at the required mognificotian.

Didot LineArt and DA's Vectar have true marquee zoom but pockoges like Degos ond Prism Point hove focilities which ore pretty close – selecting zoom produces o box which can be maved araund the screen.

AIRBRUSHING

Airbrushing isn't abaut special effects – several books have been written on the subject ond no professionol computer ortist cauld live withaut it. Whot is impartant is the number of different settings that con be achieved os the finer control, the better the result.

The best pockoges provide o combinotian af flow and nazzle size – Silhouette hos 36 different nozzle sizes but only ane flow setting while Prism Point hos different settings for size, shope, flow ond speed.



Spraycan or airbrush – the name isn't half as important as the settings

➤

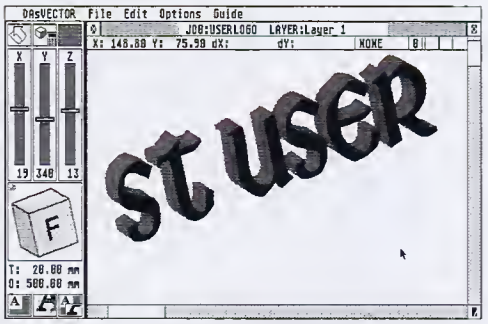
a standard ST. It is alsa unique in one particular respect – it can function as a desk accessory and be called from within other DTP programs, provided you have enough memory.

DA'S VECTOR

DA's Vector boosts the same oddly likeable user interface as its illustrious sister package, Didot LineArt. This isn't surprising as it was develaped by the same progromming team.

It is supplied on three double-sided disks with an 80-page ring-bound A5 monuol.

The bulk of the manual is online in the farm of a special desk accessory called



Objects can be filled with colour or even images

DA's Knowhow. DA's Vector is a vector graphics package with some rather unusual copobilities – it can do complex animations using keyframe techniques, autamatically generate charts and graphs, and create true colour output using an internal palette of 16.7 million colours.

Like LineArt it has PostScript and Calamus font support and an autotracing module but it has plenty more besides. It can give text and graphics a 3D effect, called extruding, and can make multiple offset copies which change colaur and size into the bargain – with results similar to the blend function seen on top professional illustration packages.

Although it was really designed ta make the most of the Falcon's true colour capabilities it will run quite happily – and surprisingly fast – on any ST with 2Mb or moreand a mano monitor.

One of its most powerful features is its

Paint packages

	Degas	Prism Paint	Hyperpaint 2	TruePaint	Arabesque	Silhouette	Megapaint/Pro
Supplier	Electronic Arts	CGS	Atari	HiSoft	HiSoft	Ladbrokes	Silica
Phone	0753 549442	081-686 8121	0753 533344	0525 718181	0525 718181	0772 203166	081-309 1111
Price (£)	24.99	62.28	34.99	39.99	149	60	39.95/219.95
RAM required	512k	1 Mb	512k	1 Mb	1 Mb	1 Mb	1 Mb
ST resolutions	LMH	LMH	LMH	LMH	H	H	H
Zoom range	12x	23x	16x	10x	16x	8x	8x
Zoom levels	12	21	16	8-10	4	2	3
Marquee zoom	●	●	n	–	–	–	y
Import Degas	●	●	●	●	●	●	●
Import IMG	–	–	●	●	●	●	●
Import GIF	–	●	–	●	–	–	–
Import TIF	–	–	–	●	–	–	–
Import IFF	●	●	–	●	–	–	–
Import PNT	–	●	–	●	–	–	–
Export Degas	●	●	●	●	●	–	●
Export IMG	–	–	●	●	●	●	●
Export GIF	–	●	–	●	–	–	–
Export TIF	–	–	–	●	–	–	–
Export IFF	–	●	–	●	●	–	–
Export PNT	–	●	–	●	–	–	–
Pick colour	–	●	–	●	–	–	–
K-Lines	●	●	●	●	●	●	●
3D mode	–	–	–	–	●	–	–
Spraycan settings	9	4608	18	144	9	36	100
Brushes	16	16	16	218	20	1	12
Smudge/blend	●	●	●	●	–	–	–
Lasso	–	●	●	–	●	–	●
Use Beziers/splines	–	●	–	●	●	●	●
Help lines	–	–	–	–	–	–	–
Snap to grid	●	●	–	●	●	–	●
Block manipulate	●	●	●	●	●	–	●
Fill patterns	36	72	72	36	108	38	160
Custom fill	●	●	●	●	●	●	●
Gradient fill	–	–	–	–	●	–	–
Fill with image	–	–	–	–	●	–	–
Bitmap fonts	●	●	●	●	●	●	●
Vector fonts	–	–	–	Speedo	–	–	–
Undo facility	●	●	●	●	●	●	●
Animation	●	●	–	●	–	–	–
Atari ST User rating	2	4	3	3	4	2	4

ability to fill vectar abjects including text with halftones or calour images. The images have to be converted to the program's own variation of the TIFF format first using the supplied utility but the results ore ostonishing.

Conclusion

Any analysis of the best features of o graphics package is bound to be subjective. There is such a wide range of programs, from basic bitmappers like Hyperpaint to complex presentation graphics systems like DA's Vector, thot any recommendotion will depend upon your exact requirements.

For sheer excitement, DA's Vector has to be the package to strive for. It can create prafessional quality graphics as well as full colour keyframe animations and 3D charts. You could even animate the charts!

The price is right too – well within reoch of the home user. This mokes it hard to recommend Didot LineArt, of course – DA's Vector does all thot LineArt con do and more besides.

EasyDraw 2 and Hyperdrow are just too long in the tooth to recommend – they don't suppart CVG output and just aren't creative enough. Put the money towards a combined vector/bitmap package instead.

For mono users, Megapaint II looks a good buy for bitmap graphics but the Professional version is just too expensive. Perhaps a better bet would be Arabesque ar Silhauette, bath affardably priced with plenty of good feotures, including vector graphics and in Silhouette's case, autotracing.

Prism Paint, though relatively expensive, is my favourite colour paint package. It has all the tools you'll ever need, great animotion facilities and true colour capabilities for the Falcon.

Degas and Hyperpaint are still worth looking at, although Truepaint might turn out to be a better investment. While it looks great on the Falcon, using the astonishing colour palette ta good effect, it's still equally good on the ST for everyday use.

Drawing packages

	Arabesque	Silhouette	Megapaint	EasyDraw 2	Hyperdraw	Didot Lineart	DA's Vector
Supplier	HiSoft	Ladbroke	Silica	GST	Atari	CGS	CGS
Phone	0525 718181	0772 203166	081-309 1111	0480 496666	0753 533344	081-686 8121	081-686 8121
Price (£)	149	60	219.95/39.95	51.52	39.99	235	149
RAM required	1Mb	1 Mb	1 Mb	512k	512k	2 Mb	1 Mb
ST resolutions	H	H	H	MH	MH	H	H
Zoom range	16x	16x	8x	5x	12x	88x	100x
Zoom levels	5	7	I	3	12	I	I
Marquee zoom	–	–	I	–	●	●	●
Import GEM	●	●	–	●	●	●	●
Import CVG	●	–	–	–	–	●	●
Import EPS	–	–	–	–	–	–	–
Export GEM	●	●	–	●	●	●	●
Export CVG	●	–	●	–	–	●	●
Export EPS	–	●	–	–	–	–	–
Bitmap objects	●	–	–	–	–	–	–
Draw round box	●	●	●	●	–	–	–
Draw closed polygon	●	–	●	–	●	●	●
Draw arcs & segments	●	●	●	●	●	–	–
Edit individual points	–	●	●	–	–	●	●
Use Beziers/splines	●	●	●	–	–	●	●
Help lines	–	–	–	–	–	●	●
Snap to grid	●	●	●	●	●	●	●
Skew object	●	●	●	–	–	●	●
Rotate object	●	●	●	●	●	●	●
Complex duplication	●	●	–	–	–	–	●
Fill patterns	72	36	224	39	36	36	0
Custom fill	–	●	●	●	–	Grey	Colour
Gradient fill	–	–	–	–	–	–	●
Fill with image	–	–	–	–	–	–	●
Bitmap fonts	●	●	●	●	●	–	–
Vector fonts	–	–	–	–	–	●	●
Multiple work screens	●	–	–	●	●	–	–
Object layering	–	–	–	–	–	–	●
Undo facility	●	●	–	–	●	–	–
Group objects	●	–	●	●	●	●	●
Charting facility	–	–	–	–	–	–	●
Animation	–	–	–	–	–	–	●
Autotracing facility	–	●	–	–	–	●	●
Atari ST User rating	4	4	3	2	3	3	5

Slave to the rhythm

Add some dynamism to your live musical performances with Slave Driver v2.1, an ingenious program designed to free you from the shackles of technology. Phil Morse takes to the stage...

One af the major problems with taday's new music has praved ta be the live situation. It's all very liberating having a computer when you're writing your songs – there's no need for me to reiterate the freedom in the hands of anyone with a half-decent musical idea, a basic sound module and a sequencer – but when it cames dawn ta actually bashing the stuff out live, things cease to seem as clever.

The basic problem is, it would seem, that the live situation as we all understand it – four sweaty men armed with various sticks, planks of wood and things to hit – is a far cry from the banks of samplers, effects units, keyboards and flickering screens characteristic of new, hi-tech music.

When the equipment is quite capable of playing the music in its entirety without any human help, where does that leave the musicians? Where does that leave the whole idea of "live" music?

HIGHLY FRAGILE

Some performers have understandably decided that carting around a pile of highly fragile and expensive equipment just ta press a buttan ta trigger it all off is simply not worth it, and have opted for singing live over DAT recordings of their music.

Such thinking has given birth to the – often justifiably maligned – so-called "persanal appearance" circuit which has established itself on the club rounds.

Others, not prepared to completely abandon the spontaneity offered by playing live instruments, have stuck with their sequencers and played one or more of the parts live, allowing expression to squeeze its way through the stage door.

However, this is a far from perfect situation. What if you want to break from the song structure, in order ta, say, allow your over-zealous and crowd-pleasing bongo player to bash his skins for another eight bars?

What if you're in the middle of the last charus, the crawd have last it, and you know damned well that the sequencer is gaing to end the song – abruptly – in about three bars' time? Where's the spontaneity there?

The fact is that being tied to rigid arrangements pre-pragrammed an a sequencer is about as far from the true, rock-bred spirit of a live performance as can be.

What is needed is same kind of system whereby the control over exactly what is played in a live situation is put right back into the hands of the keyboardist who is controlling it all. Surprise, surprise, this is where Slave Driver comes in.

At its very care, Slave Driver is a Midi mapping device. This means that it can "map" where an incoming piece of Midi information – which can be from anywhere – will go to, and what effect it will have.

All Midi equipment runs using Midi maps. When you press a key on your Midi-ed up keyboard, it is shot to the computer sequencer, which instructs your synth or sound module to react in a certain way – usually, to switch the selected nate on, awaiting the following message, which will prabably be a Note Off command.

Slave Driver has the ability to intercept any Midi messages and tell them to do anything you wish. This means that, from your master keyboard, you suddenly have the ability to control your equipment in any way yau desire.

KEY TRIGGERING

Pitch bending, chorus and reverb, triggering other Midi channels... all are suddenly available to you, triggerable from any key ar cambinatian af keys of your choice.

Although Slave Driver will find its use primarily in the live situation – about which more later – this is not where it stops. As you have to tell the software exactly what your plans for intercepting the Midi information are – program it, in ather words – you can program quick and simple keyboard-controlled access to absolutely any parameters you like.

If you want your pitch bender to play chords, you can do it!

You can use the Midi-mapping controls to interface different Midi equipment. Manufacturers are notorious for implementing tiny differences which can cause all types of compatibility problems when using one company's

A loop the loop era

Another solution to the problems of playing new, sequenced music live, is thot which chart-busters the Stereo MCs – acclaimed for their powerful and exhausting live performances – have chosen to odopt.

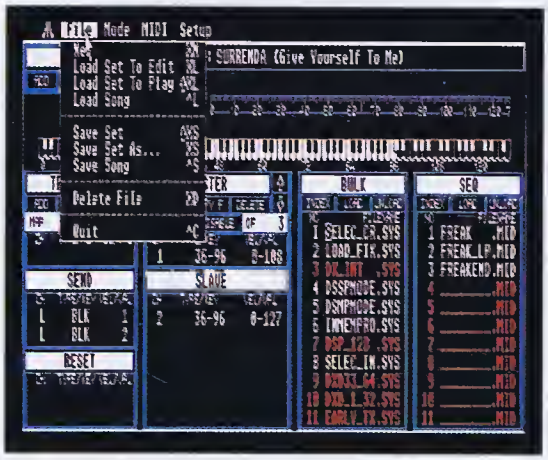
They have every track in o song playing simultoneously through o mixer, which is under the control of a band member.

The tracks can be faded in and aut, messed around with effects-wise, and generolly tweaked spontaneously os the song is progressing, by simply messing oround with the mixer. If a chonnel is switched off, it is still gaing, but the audience just con't hear it.

This hos put o lot of flexibility back in the honds of the band, and allaws them to ride waves af crowd enthusiasm or even shorten bits in songs if they wish.

Such o method is ideally suited to the band thanks to the essential "groove" nature of their music, where repetitian is port af the key to building up o hypnotic, cyclical groove, embellished with vocals.

However, the judicious use of softwore like Slave Driver alangside such o set-up could certainly nat harm things, and indeed wauld increase the level af contral over the music being played to heights where – althaugh the control monifests itself in new ways – there is enough to offer the skilled performer all the flexibility he or she could wish for.



The program's main edit screen

Standard extras

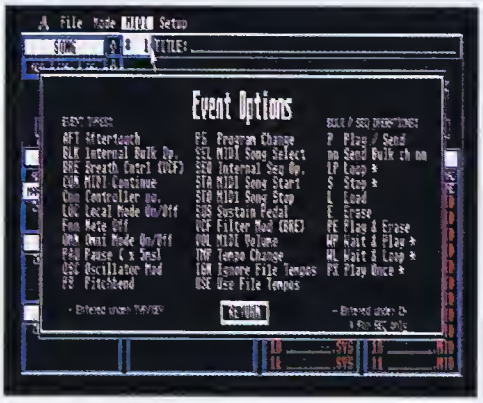
As well as the features described in the main review, Slave Driver is endowed with extra parts which help to make its use – often in stressful live situations – as easy as possible.

The generic librarian simply saves and loads system exclusive (sysex) messages pertaining to your particular Midi equipment.

This means that, with the correct user-programming, you can use Slave Driver to gain access to sound libraries – again, all from your synthesizer's keyboard. Great for getting right to the heart of your synth, in the dark, half-way through your first live song!

The "remote display module" allows the package to transmit information to the LCD display units of various synthesizers. Currently supparted are the Yamaha DX7, the Roland D-series and the Alesis D4.

This negates the need to toke a monitor along to gig with you as well as the computer, effectively turning your ST into a hardware sequencer – but offering a level of control far above any conventional hardware sequencers.



There no shortage of controllable events

products with another, and Slave Driver can iron out these differences once told what they are.

The software comes on a single floppy disk, with an extremely professional, ring-bound rewrite of the criticised first monual. There are a number of example sangs, each demanstrating a different aspect of using the softwore, a tutoriol ond o demo.

You program the software in maps. A sang can contain up to 255 maps, and this is saved to disk. Continuing the hierarchy, a "set" can contain up to 255 songs – mare than enough far most live situations, one would imagine.

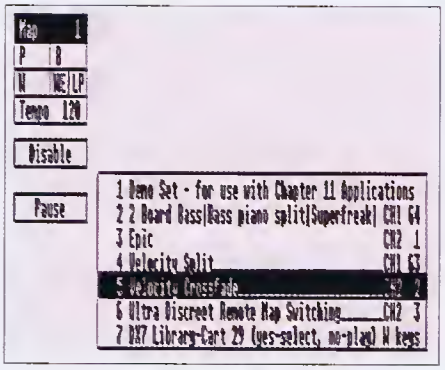
Whether the program shines or foils is really in the hands of the user, meaning that what you decide to tell it to do will determine its usefulness to you.

You can stick to very basic ideas, using a key or keys to load up the next song (or onother one, or onother one – changing a play list mid-set can be as simple as hitting a key), or yau can get complicated and tell Slave Driver to watch out for a certain sequence of notes, for instance, and jump to another part of the song when it hears them.

In this way you can extend solos and breaks to go on for as long as you wish – accommodating the exciting bashings of your bongo-player, for instonce!

All you need do is continue jamming away, ond when you wish a sequence to end, play your designated solo-ending notes in the right order to tell Slave Driver to jump to whatever you have decided it should do next.

What obout using o foot pedal to give you extra control? You can tell it to play a chord when depressed and start yaur drum line when up, leaving both hands free for other things.



The performace screen, tuned for simplicity

CONCLUSION

Slave Driver is a pretty unique piece of saftware. It affers a degree af control over on orea of Midi music where control has hitherto been limited to start, stop and song order.

It must be remembered that this is not o sequencer – it is o powerful packoge allowing an unprecedented degree of access to previausly written Midi files. It concerns itself purely with alteration of what already exists.

Like very powerful sequencing packoges, Slave Driver overwhelms with its potential. Although the monual provides exomples of its use, what you actually do with it is totolly up to you – in this respect, it is o "transparent" package.

Should you have the time and methadical approach to your work to make something like this o port of your setup, it will develop with you.

Yau will slowly became aware af its features and potential, integrating it into your setup until you find it a centrol port of your music writing and playing activities.

By definition, though, it will also be very personal – imagine letting the uninitiated loose an a keyboard where middle C on Midi Channel 2 activates a sting ensemble while loading the encore song from disk!

On equipment used by more than one individual, either separate Midi mops for each person will be required, or everyone will have to learn together!

As an intuitive program, Slave Driver tries its hardest to be friendly and usable. However, its sheer power ond lock of any predefined functions mean that it requires a lot of time and effort on the part of the user.

Should you be prepared to put in this effart, however, yau cauld be in control of a Midi setup that would make any normal file ploybaxk system look like mechanical child's play.

This is definitely an exciting step forword for the performing electronic musician, and one which the diligent, forward-thinking perfarmer should seriously consider becoming o part of.

Midi is growing up...

Tell Slave Driver what to do when you hit Panic!

BOTTOM LINE

FEATURES

The highly transparent nature of the program means that it can do basically anything you want it to!

Excellent
Good
Average
Bad
Appalling

EASE OF USE

The excellent manual and well thought-out design take the sting out of a steep learning curve and inherent complexity.

Excellent
Good
Average
Bad
Appalling

VALUE FOR MONEY

Yet to be confirmed for the UK, hence no score – but what price art?

Product: Slave Driver
Supplier: PO Box 56522, Lougheed Mall Postall Outlet Burnaby, BC Canada; V3J 7W2
Telephone: 0101 604951
Price: £TBC
Configuration: All STs and TT

FAST ST REPAIRS

Upgrades + Engineering requirements

★ GUARANTEED SAME DAY SERVICE
£34.99 + parts computers received by 11.00 a.m.

★ NORMAL SERVICE
£24.99 + parts (Typically 24 hrs)

Door to door pick up + delivery anywhere in the U.K.
Also Mono + Colour Monitors

Low Cost upgrading

STE to 1Mb	£13.99
STE to 2Mb	£49.99
STFM to 1Mb	£44.99
STFM to 2.5Mb	£79.99
TOS 1.4	£25.00
TOS 2.06	£POA
Double Sided Drive	£47.00
Power Supply	£39.95
Power Supply (Replace)	£25.00

Fitting for the above from £15.00

Central London

HCS ENGINEERING

144, Tanner St., Tower Bridge, London SE1 2HG

Tel. 071-252 3553

ATARI REPAIRS

Repairs undertaken to Atari computers at £49.95 inclusive of parts, labour, VAT and return postage/packing

Full technical support

·Computers repaired in the quickest possible time

All machines will be overhauled with a full soak-test to ensure optimum reliability

Entrust your machine to the experts, full 90 day warranty

Repairs to disk drive and power supply also included (extra charge possible if found to need complete replacement)

Repairs to other Atari systems undertaken - phone for details

Upgrades and expansions supplied and fitted - phone for details

£49.95

To take advantage of this exceptional offer, simply send or hand deliver your computer to our workshop complex, address details below, enclosing this advertisement-voucher, payment, fault description, return address, along with your daytime and evening telephone number and we will do the rest.
Should you require Group 4 Security return delivery, simply add £5.00 to the repair charge.

Access VISA

WTS Electronics Ltd Chaul End Lane Luton Bedfordshire LU4 8EZ Tel 0582 491949 (6 lines)

(We reserve the right to reject machines which, in our opinion, are beyond repair- Normal charge applies)

In general, the ST is a pretty reliable beast. However, considering the complexity of its innards, it would be a foolish person indeed who claims that nothing will ever go wrong with it.

Sooner or later (preferably a lot later) your ST may develop a fault of some description. There are a number of options that are open to you should it suddenly stop working properly.

If it is still under warranty, you can return it to your dealer, and this is the option you should always take if this is the case.

If it develops a fault within the few weeks, most reputable dealers will replace it with a new machine there and then. Any later and it is usually sent to the dealers' workshop or to Atari for repair.

The warranty does not cover breakages due to carelessness, so taking your broken ST to the dealer with coffee stains all over it will get you nowhere. Also, it is vital that you have your receipt for proof of purchase.

Once the ST is opened, removing the disk drive is simply a matter of unscrewing three mounting screws, then unplugging a power and data lead

Servicing with a smile

Darren Evans takes a look at some of the things that can go wrong with your ST and how to deal with them

You can attempt to do the repairs yourself if you know what you are doing, or you may know a friend who has the necessary knowledge and skills who will help you for the cost of a couple of pints.

If you do attempt a DIY solution either yourself or through a friend, many repair centres also sell spare parts such as power supplies and also some of the major electronic components such as Shifter, Blitter MMU and floppy disk controller chips.

The easiest and safest method for repair is obviously to send it off to a specialist. However, The disadvantages are that you will be without your machine for a while, and specialists cost money.

Prices vary but most repair centres also offer a 90-day guarantee on any work done. However, some centres are unwilling to attempt repairs on STs that have been played around with by their owners.

The choice of how to deal with the problem depends on how confident you are at doing it yourself or whether and not you can afford the repair costs as well as the time without your ST.

Also, a fault may be simply due to a loose chip on the circuit board and sending it off to a specialist for him to just push it in place and charge you for it is not worthwhile.

So, let's list a couple of common problems and how you can deal with them yourself instead of immediately reaching for your cheque book.

Like a car, the problems you will encounter will fall into one of two categories – wear and tear on ports or accidental damage.

The most common ST component to wear out is the power supply. This is the most heavily abused part because it's where you obviously switch your ST on and off every time you want to use it.

Also, if you are cautious about viruses, you will probably be avoiding using the reset switch to restart your ST, choosing instead to completely turn off the power with the power switch to clear out possible viruses.

Although highly recommended, such action does add extra burden to the power supply. A faulty power supply can cause further damage to other components such as diodes and transistors.

MODULAR COMPONENT

Luckily, the power supply is a modular component and it's simply a case of buying another, opening up your ST and slotting it onto the circuit board.

Then you simply plug in a lead from the power supply to the socket on the circuit board, so if you are confident, you can do it yourself.

Be careful though – when turned off and even disconnected from the circuit board, there are still components on the power supply that may retain a hefty electrical charge.

Another extremely common problem is wear and tear on the infamously positioned joystick and mouse ports. To digress a little, let's just hope that the designers of the new case for the Falcon realise how many swear words have

➤

CAUTION – SAFETY FIRST!

A few safety precautions need to be observed before attempting any internal work on your ST, and they are as follows:

1. Opening up your ST while the power lead is still connected is extremely hazardous.

Only open your ST if you have some experience with electrical products and always be sure to remove the power lead first. If in doubt, call in the experts to sort out your problem.

2. The electronic components inside your ST are very sensitive to static, so before you start handling them, be sure to earth yourself. This can be done by touching a radiator or anything else that is earthed in the house.

However, a much more elegant solution is to buy an anti-static wrist band from any electronics shop. This fits on your wrist and plugs in to a power socket. Don't worry though, you won't fry, only the earth is connected and hence it will keep you free of static.

been uttered in frustration at them, and avaid any repeat of such design errors.

Because af the awkward positian of these ports and also the less than secure manner in which they are attached to the circuit baard, constant plugging and unplugging of the mouse will eventually lead to problems.

The most common symptom is erratic mause mavements with the mause pointer seemingly having a life of its own and not going where you want it to.

The first thing you should do, if possible, is visit a friend and try yaur mause on his ar her computer. If it daesn't work there either, it may actually be a problem with the mouse. If it does work, the problem is with the parts.

Because of the plugging and unplugging of the mause ar jaystick, the actual salder which fixes the pins of the port ta the circuit board will have became loose, causing intermittent connectians.

The cure is to open the ST, unplug the keyboard, turn the machine aver, unda all the screws on the underside ta reveal the circuit board, then apply a little heat with a saldering iran ta all the pins which cannect the ports to the circuit board.

UNDUE PRESSURE

Another common problem assaciated with the awkward pasitian af the mause and joystick ports is when a user decides to tilt the ST from the front in order to plug the mouse or joystick in.

If yau have any leads plugged in at the back, say from your printer, hard disk ar modem, this will cause undue pressure on the pins which cannect the ports on the back af the ST ta the circuit board. It is wise to remove any leads if you intend to da this.

The ideal and inexpensive solution to the mouse/jaystick port problem is to buy a set of extension leads. These consist of twa plugs which plug inta the ports an the ST and also two leads which extend from under the keyboard and which end in two sockets, inta which yau plug yaur mause ar jaystick – a simple and essential solution to the problem. Another problem, mostly restricted to pre-STE machines, is chips warking laose fram their sockets. A particular prablem I encauntered was when ane af the TOS ROM chips came laose. The ST's Desktop came on screen OK, but every time I went to the menu or even tried to highlight a drive icon, the machine wauld reset.

One af the mast unarthadox methods af fixing the "laase chip syndrame" is also one of the first things a qualified technician will probably do as soon as he gets a faulty ST.

This invalves halding the ST level, about 50cm fram a firm surface, and then letting it drop. This has the effect of re-seating any laase chips and curing the problem. This is not an ideal salutian, but if yaur ST subsequently warks after doing it, you can be sure a loose chip is indeed causing the hassle and you may then open up the machine and press any socketed chips firmly into place.

Disk drives, althaugh generally very reliable, can suffer fram problems. With prices as law as £39 and easy removal and fitting, it may be be cheaper ta buy a replacement rather than attempt repairs.

ELIMINATION

If you da start ta suffer fram problems with laading pragrams ar general reading/writing operations, knowing someone locally with an ST is very useful. If this is the case, take your drive ta yaur friends and swap drives. It should then be a simple matter of figuring out whether the

Drive errors and maintenance

Same drive problems stem from either wear and tear, misuse or inexperience an the part of the user. Here are a few problems which may occur, and possible reason and remedies. Remember, with the current law cast of drives, it may be mare ecanamical ta buy a camplete replacement. Keep yaur old drive though as this may be a valuable saurce af spares.

Fault	Possible reason and action
"Drive not respanding error"	If internal, check power cable and data cable are connected. If external, check pawer is on, data cable is properly connected.
"Drive may be damaged" error	May be a bad disk – check drive using other disks. Drive heads may be dirty, use cleaning fluid. If heads damaged, replace with spare.
Read but no write	Faulty/dirty write-pratect LED or switch, try cleaning.
Drive matar nat turning	If internal drive, check pawer cable. If external, check pawer cable/plug wiring and fuse.
"Write pratect errar"	Yau guessed it. Remove write pratect.

Yau should always keep yaur disks in a dry, dust-free enviranment, preferably a bax. Any dust which accumulates an them will be transferred ta the drive heads.

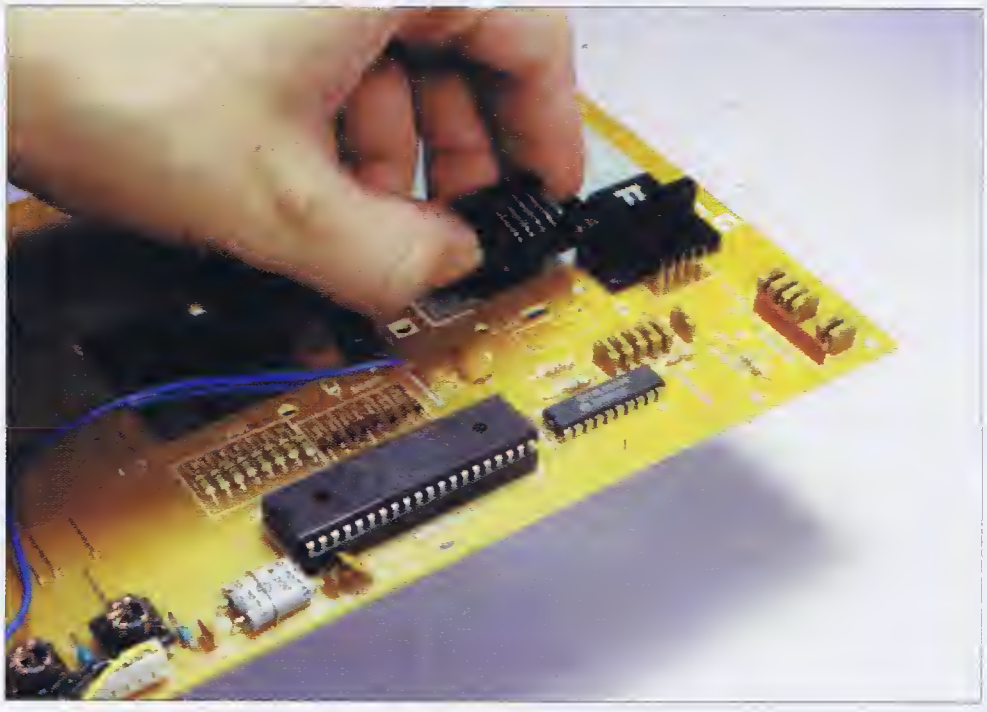
Always keep liquids (caffee, far instance) and disks at an extreme distance – they just don't get on tagether.

Alsa, strang magnetic farces (telephanes, hi-fi speakers), bright light and excessive heat will damage yaur disks.

Never tauch the magnetic surface af a disk – grease and maisture will cause read/write prablems. Do not leave a disk in the drive when switching drive/camputer on or off – always eject it first.

Dusty environments and disks can damage the disk drives heads. Cleaning them may resolve the problem but if they are scratched, a new drive may be in order

Having the right tools for the job will make any DIY attempts at repair free of frustration



problem lies with yaur drive or your computer. See the table "Drive errars and maintenance" for mare details.

Of course, ony DIY attempts on your port are daamed to frustratian if yau dan't hove the necessary tools for the jab. Besides the abligatory set af screwdrivers, a saldering iran, salder sucker, salder, lang nase pliers and wire cutters/strippers are alsa needed.

Soldering is o useful skill ta learn ond having such skills cauld sove you maney. Many cables, such as manitar leods ar null modem cables for use with multiployer games, cost onywhere fram £7 to £15 if baught ready made fram a deoler.

Buying the parts yaurself and using yaur saldering iran can cut costs to os little os o cauple of quid. If you wish to learn how to salder, which isn't os difficult as it may seem, there ore many baaks to be found which caver bosic soldering skills.

Moplins have a ronge af baaks that caver saldering techniques fram beginners to odvonced sa they moy be worth o visit. Another mare exotic (ond expensive) electranic tool that is warth its weight in gald is o multimeter, which is o device far meosuring and testing for electronic currents.

Usuolly consisting of o dial and LCD readaut, it allaws yau to check far such things os breakages in cables and faulty fuses.

If yau do find yaurself eventually apting far the sofe poth and sending your ST aff to o speciolist repoir centre, it is odvisable ta send it securely packed.

Preferobly, keep the box it come in ond send it in thot. Any damoge due to impraper packaging will anly result in delays getting back to yau.

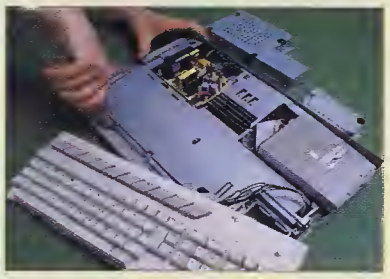
Corelessness is onother reasan why STs sametimes die. Yau hove to laak after yaur machine! Liquids, faad crumbs ond young, unottended children con oll wreak hovac.

The lotter are even more deodly when cambined with the farmer, sa olthough young children ore to be encouraged to learn to use the computer, make sure they are supervised.

Opening time

If yau da decide ta apen up yaur ST far a spat af DIY, here's the pracedure. Be owore however thot such on oction will immediately involidate any existing warranties. Make sure the pawer lead is unplugged first though. If in daubt, send it aff to the experts.

1. Turn over your ST and undo all the screws using the correct size screwdriver making sure to put the screws in a safe place



2. Turn the ST back over and gently tilt the lid from the left side being careful about the disk drive eject button

3. Move the keyboard out of the way or complete unplug it, then, preferably using long-nosed pliers, twist all the retaining lugs on the shielding and power supply cover

4. Unplug the drive first and then remove the shielding to reveal the ST's circuit board. The power supply is held down by two screws and has a power lead connected to the circuit board which can be unplugged

The infamous mouse/joystick ports can cause annoying problems with the mouse. Re-seating the port pins will probably cure the problem

Quick chip fitters

If the thought of opening up your ST and fiddling with its innards makes you queasy, there are a number of repair centres who will do the job for you.

Most give a 90-day warranty on all parts. With varying repair charges and available services such as insured courier pickup/delivery on offer, shop around for the one that suits you.

● System Solutions, The Desktop Centre, 17-19 Blackwater Street, East Dulwich, London SE22 8RS. Tel: 081-693 1919 or for Windsor service centre call 0753 832212

● Silica Systems, 1-4 The Mews, Hatherley Road, Sidcup DA14 4DX. Tel: 081-309 1111

● Ladbroke Computing, 33 Ormskirk Road, Preston PR1 2QP. Tel: 0772 203166

● HCS Engineering, 144 Tanner Street, London SE1. Tel: 071-252 3553

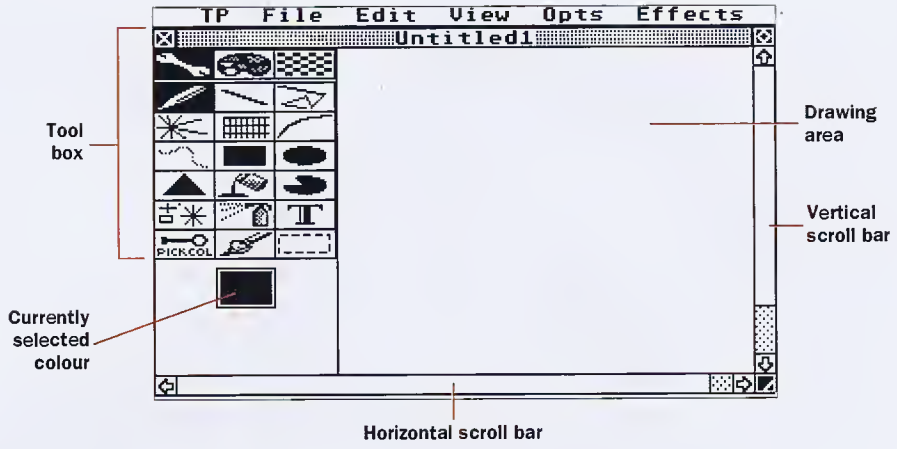
● Evesham Micros, Unit 9, St Richards Road, Evesham WR11 6TD. Tel: 0386 446441

● The Upgrade Shop, 37 Crossall Street, Macclesfield SK11 6QF. Tel: 0625 503448

● ACS Electronics, B.E.C Eldon Street, South Shields NE33 5JE. Tel: 091-455 4300

● Analogic Computers (UK) Ltd, Unit 6, Ashway Centre, Elm Crescent, Kingston-Upon-Thames KT2 6HH. Tel:081-546 9575

● Gasteiner, Unit 2, Millmead Business Centre, Millmead Road, London N17 9QU. Tel:081-365 1151



The whole truth – in colour

Darren Evans takes a look at TruePaint, HiSoft's art package for the ST, which claims to be the first to take advantage of theFalcon 030's true colour capabilities

There are quite a few art packages available for the ST with Degas Elite and Deluxe Paint being the most well known. So what does HiSoft's packoge offer that the others don't?

Well, for starters, not many art packoges can boost compatibility with oll STs, the TT and the Falcon030 – TruePaint can. Alsa, with the many software and hordware upgrodes available thot can extend the colour copabilities and resolution of a standard ST, such as the Crazy Dots colour graphics card from System Solutions, not many can cloim to work in any screen resolutian provided by such products; TruePaint does.

In foct, TruePaint is one of the most flexible and eosy to use art pockages I have yet used on a ST, and, with the eventual release of the Falcon030, TruePaint can claim to be the first art package designed to take advantage of the enhanced graphics features such as overscan, VGA ond true colour screen modes that the Falcon offers.

BUILT-IN ROUTINES

Programs that can adapt themselves to such enhanced screen modes offered by graphics cards and the TT or Falcon generally do so by making use of the built-in VDI routines (found in all STs) that form part of GEM.

Unfortunately, most programs that I have used that utilise the VDI for it's grophics output tend to be extremely sluggish. This is due to the fact thot the ST's operating system, and hence the VDI, wos written in a language called C.

C is a powerful language, but is relatively slow compared to a program written in machine code. Therefore the actual screen autput rautines are nat exactly optimised for speed.

I was therefore expecting o certain lack of performance from TruePaint compared to custom written art packages such as Deluxe Paint. However, my fears were soon dispelled.

Upon loading TruePaint, my first test was to see if it could keep up with quick drawing movements using o fairly lorge brush. Many programs find themselves unable to cope, with the result being that the actual line being drawn cannot keep up with the mouse, lagging behind considerably.

Trying to quickly draw o circle often results in a triongular shape becouse of this.

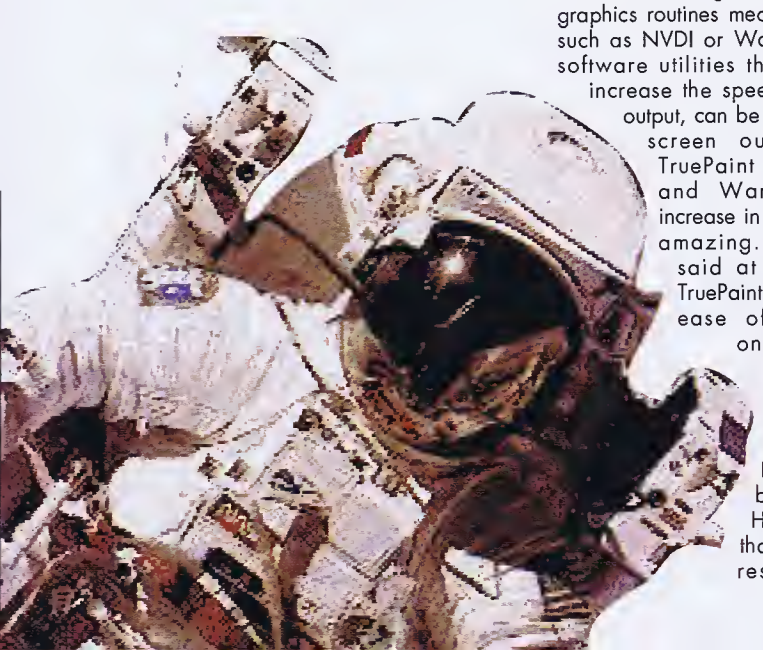
TruePoint managed admirably compared to other pockages which only goes to show that some effort hos gone into making the graphics routines as fast as possible while maintaining compatibility.

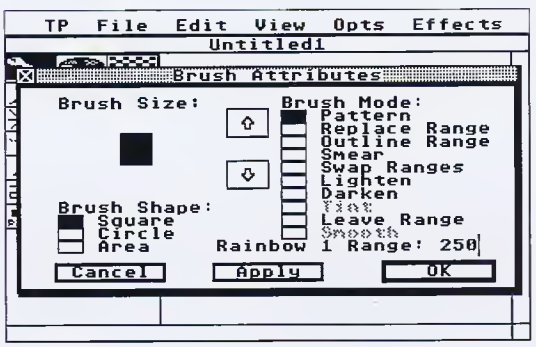
While on the subject of speed, TruePaint's usage of the ST's native graphics routines meons that programs such as NVDI or Warp 9, which are software utilities that dromatically increase the speed of VDI screen output, can be used to speed up screen output. I tested TruePaint with both NVDI and Warp 9 and the increase in performance was amazing. It has to be said at this point thot TruePaint was written with ease of use in mind ond those looking for masses of complex features and effects, such as those found in Deluxe Paint, will be disoppointed.

However, the fact that Deluxe Paint is restricted to low resolution and 16 colours mokes TruePaint a lot mare desirable in terms of visual quolity thanks to its multi-resolution capability, coupled with the ability to use the extended colour modes of the Falcon ond TT.

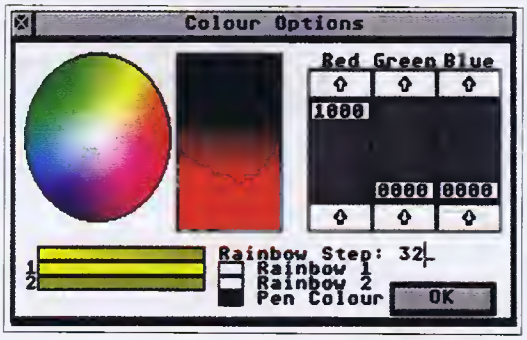
Even so, TruePoint's range of feotures is still nothing to sneeze at.

One of this most impressive features thot immediotely grabbed my interest was the range. The wide range of picture files supparted is made passible by HiSoft's External File Management System (EFMS) which is a collection of programs which understand how to





Various brush modes allow for some powerful image manipulations such as smoothing and smear



In TrueColour mode, the normal palette type colour selector is replaced by a more versatile and intuitive colour wheel

laad and/ar save particular image farmats.

When yau run TruePaint, these external File Managers (EFMs) con be loaded inta memory and will then allow yau ta laad and save in the picture format which the progrom supports.

The drowback of EFMs is that they take up memary and with some of them being 200k or more, some users may find themselves running low. Fortunately, yau can enable and disable them fram within TruePaint sa that yau are only using the ones you need for o particulor session.

The mojor odvantoge of the EFMs feoture is that shauld any new picture formats appeor, it will simply be a matter af writing a EFM pragrom ta coter far it.

PICTURE CONVERSION

Also, with a few restrictions, TruePoint's ability to handle various picture formats allows o certain degree of canversion fram ane farmat ta the other. This conversion ability alone makes TruePaint a art program that should be in everyone's saftware callection.

Actually using TruePaint is a joy. Full use is made of GEM to ensure a friendly and very easy ta use environment. As many pictures os memory allows can be opened, each being assigned their awn windaw. Images larger than the current resolutian can be scrolled using standord scroll bars.

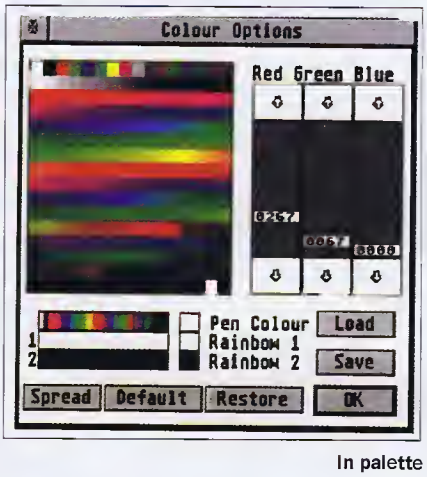
In fact, each windaw is identical ta thase used on the narmal Desktop with open and close boxes, re-size box and title bor.

This multi-windaw ability makes for some pretty powerful cut and paste facilities which allow yau to copy or cut parts of a picture from ane windaw, inta the window af another.

Another excellent feature is the fact that you are not limited to the current resalutian when drawing. Selecting New from the main menu brings up a requester box with numeric values shawing the width and height (in pixels) af the current resalutian.

These values can be chonged simply by entering new values far the screen size required. Conversely, this also allows pictures with o greater resolution, such as mono, to be loaded an a colour monitor and subsequently scrolled around to view the entire image. Besides viewing images in their awn specific windows, there is also a full screen mode allawing o larger viewing orea. Again, any images laoded which are larger than the current screen resolution can be scrolled oraund using the cursar keys.

If you are lucky enough to have a Falcon, the quality of images in TrueColour mode are excellent



In palette modes, the colour selection tool makes use of the RGB slider method as found in many other art packages

Although TruePaint does not have the quantity of functians found in Deluxe Paint, it does hove more than the average ort package. All the basic drowing tools such as spray can, line, freehand and rays are present, each with their awn alterable settings such os line thickness, line pattern and athers.

Other standord tools include the rectangle and circle/disk tools which can either be filled or outline, ond olso the polygon taol. All taol functions are instantly available at the click af o mause button ar via alternotive keyboard equavilants.

Some af the less common drawing tools available include Bezier curves, arc, segment, dot, airbrush and text to name a few. TruePaint's text tool is expeciolly versatile as it also ollaws outline fonts as well as bitmap fonts to be used.

Outline fonts are more versatile than bitmap fonts in that they can be scaled (enlarged ar shrunk) ta almast any size without becaming "blacky". Hawever, either Speedo or Font GDOS is required far this ability. There is olso a full ronge af text effects available such as skew, underline ond bald.

The brush taol allows the artist ta be mast creative. Here he ar she can apply a number af effects to the image. Some examples are smaath, pattern, lighten, dorken and tint.

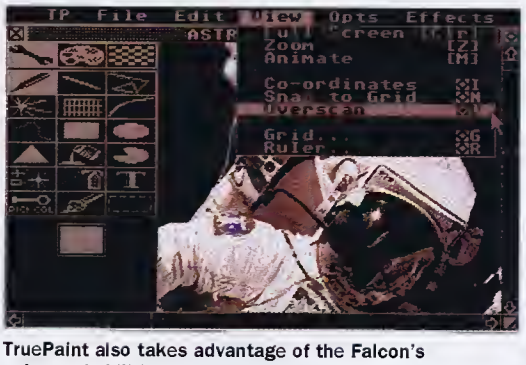
BLENDING TOOL

Smooth is only available in true colour mode and is especially usefull far blurring or smudging the area under the brush. This is deal far blending colour boundaries far shading and so on.

Selecting a calour which ta draw with is achieved by selecting the palette taal. On o standord ST, the colaur selector is in palette mode. The calaur display is divided up into rectangles, each representing a different polette colour.

Select a colour is simply a matter of clicking on one of the baxes. Each boxes colour can be altered by changing the Red, Green, or Blue (RGB) slid-

➤



TruePaint also takes advantage of the Falcon's enhanced abilities such as Overscan, which increases the screen resolution by getting rid of those space-wasting black borders

Although not exactly feature packed, TruePaint's animation ability is still quite good. There is a sample TrueColour animation on the disk to show just what can be achieved

➤

ers. It is also possible to set up a colour range which blends smoothly from one colour to another.

Things are very different in the true colour mode found on the Falcon. Because there are a greater number of colours to choose from (262,144 to be precise), the display is not restricted to a fixed amount of colours from a static palette.

To cater for this difference, a colour wheel and shade bar is used. Around the edge of the colour wheel are the pure colours of the spectrum. They become progressively paler as they move towards the centre of the wheel.

To choose a colour, you simply click anywhere in the colour wheel. The shade bor then allows you to select a particular shade for the colour selected.

Another key feature is an animation facility. Unfortunately, it does not have any tweening ability, which is my only gripe. In classical animation, tweening is a technique whereby a senior animator produces the key frames of an animation.

For exomple, o cartoon character wolking would be produced by the senior animator drowing the first frame of the character at the beginning of the walk sequence, then a middle frome would be drawn showing the character in mid walk and finally, o frame showing the character at the end of the wolk would be drawn. These key frames would be passed to a junior animator who would draw all the in-between frames to complete the sequence.

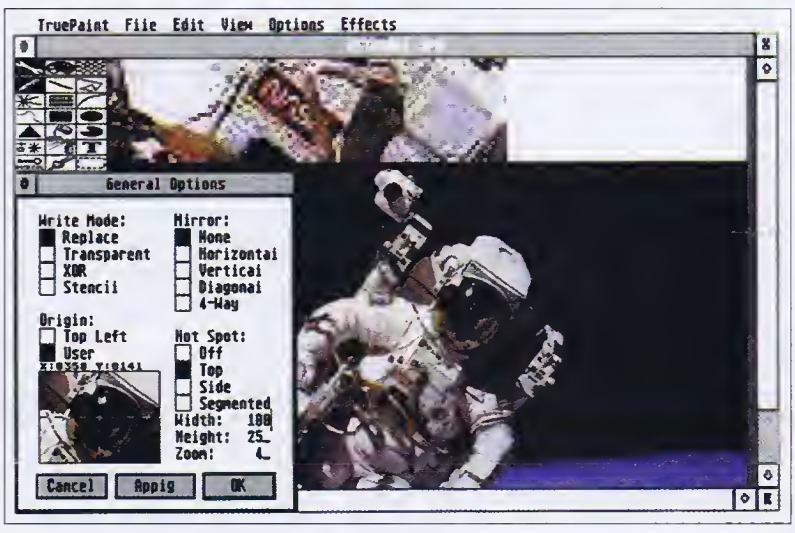
When translated to the computer, tweening ability means that you need only specify certain positions of an object and the computer would then generate the rest of the frames automatically.

This does make creating an animation less easy but then again TruePaint does not claim to be the final word in animators. However, creating good animations is well within TruePaint's capability, it's just that o little extra work is required.

TruePaint's animation facilities include comprehensive frame editing tools such as insert and delete frames as well as co-ordinate, ruler and snap-to-grid facilities, which are useful when precise placing of objects is required.

TruePaint key features

- Works in oll screen resolutions including 768 x 480 True Colour
- Extensive ronge of drawing tools and effects
- Comprehensive support of picture file formats including JPEG, TIFF, Degas and more
- Plus animotion, FSM/Speedo GDOS support and multi-window copability
- Zoom, full screen mode with edit, colour picker ond Bezier curves



Here you can set up the hot spot to edit fine detail. You can also change the writing mode and change the way the mirror feature works

As with all HiSaft products, the packaging is superlative. Inside the sturdy box you get a disk wallet containing three disks and a 164-page manual. The manual is extremely well presented ond structured.

Sections include system requirements, getting storted, detailed tutorials and full reference to all of TruePaint's tools and features. The manual also features some full colour illustrations showing off the 256 and true colour modes very nicely.

As well as superb packaging, TruePaint comes with 30 days of free technical support which begins from the date of registration.

If you experience any problems with it, you can phone the support helpline and get advice from the experts.

MORE TO COME

One thing you con be assured of if you decide to add TruePaint to your software collection is the continued improvement of the product, which is evidently a firm philosophy with the majority of HiSoft products.

David Link – head honcho at the firm – announced that v1.02, which will be available by the time you read this, is to include some additional features over v1.01 reviewed here.

As well as numerous performance tweaks, v1.02 will also include the ability to save in IMG and XIMG image formots, os well os to turn off the toolbox, visible in the image window, thereby freeing extra viewing and drawing space.

The lotter improvement is porticulorly useful when using TruePaint in the lower resolutions as the toolbox tends to occupy a substantial part of the screen orea.

In conclusion, TruePaint's ease of use and versatility, and the quality of support that HiSoft are renowned for, mean thot it qualifies as a must for anyone's software collection.

It is also a positive indication that software support for the Falcon is indeed underway.

BOTTOM LINE

FEATURES

Excellent
Good
Average
Bad
Appalling

Lacks a few useful tools found in other packages but its versatility and true colour capabilities more than make up for it.

EASE OF USE

Excellent
Good
Average
Bad
Appalling

This is a program with the emphasis on ease of use. Makes use of GEM to the full with excellent mouse and keyboard control.

VALUE FOR MONEY

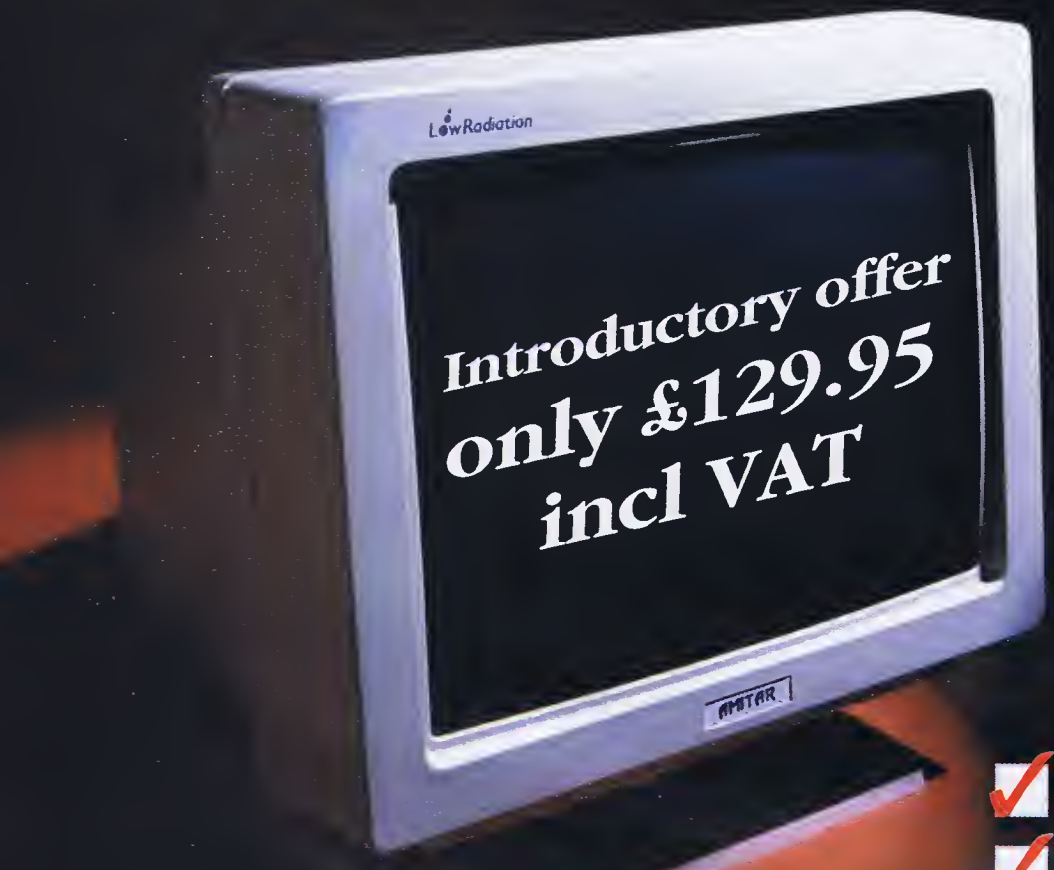
Excellent
Good
Average
Bad
Appalling

With its multi-resolution, multi-image format support and Falcon compatibility, TruePaint is well worth the asking price.

Product: Truepaint
Supplier: HiSoft, The Old School, Greenfield, Bedford MK45 5DE
Telephone: 0525 718181
Price: £39.95
Configuration: All STs and TT

AMTAR

HIGH RESOLUTION MONOCHROME MONITOR FOR ATARI



Please Ring for Attractive Dealer Prices

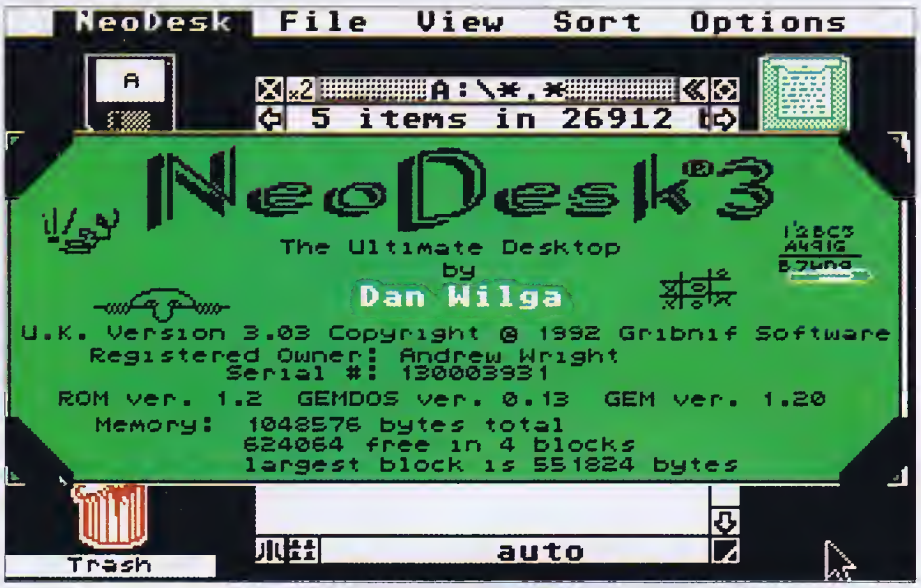
- Low Radiation
- FST
- Paper White Screen
- Tilt and Swivel Base
- Atari Connector

A quality product from Analogic Computers (U.K.) Ltd

Unit 6, Ashway Centre,
Elm Crescent,
Kingston-Upon-Thames,
Surrey KT2 6HH

Mon-Fri. 9am to 7pm Sat 9am to 5.30pm
TEL: 081-546-9575
FAX/TEL: 081-541-4671

ANALOGIC
ANALOGIC
ANALOGIC



Neo perfect?

Andrew Wright looks at the latest upgrade to the NeoDesk replacement desktop

NeoDesk has long been regarded as the perfect replacement for the ST's Desktop. It has certainly proved the most popular, with upgrade after upgrade and feature after feature being added, many in response to users' requests.

With the advent of competing replacements like the public domain Teradesk and the latest, much improved versions of TOS, the pace seems to have slowed somewhat.

On the other hand, NeoDesk is now so full of features that it's hard to imagine what else could be added, a fact that might go some way towards explaining the lack of recent activity.

EXTRA FEATURES

As if to prove me wrong, Gribnif have just released v3.03 of the desktop and v2.1 of the command line interface. The new version comes on one disk complete with a special installation program to install NeoDesk onto hard or floppy drives.

It automatically configures NeoDesk for autobooting, depending on which version of TOS you are running.

If you're buying NeoDesk for the first time you get a useful 134-page manual. If you're upgrading, you only get the disk and you have to reinstall the whole thing again.

It's a good idea to make backups of your old installation, as the program doesn't make any attempt to use your existing configuration files. The seemingly insignificant change in the version number of NeoDesk belies the number of changes – there are scores of improvements, including the all-important compatibility with the Falcon and MultiTOS.

Support for high and extended (2.88Mb) density drives has been added, although the hardware has to be present along with any patch programs supplied for those without built-in high density support. This is a little disappointing as programs like Fastcopy Pro can certainly manage without.

DISK HANDLING

Extended floppy disk formats have been included too, such as the Fast-11 format for nine-sector disks and Twister for ten-sector ones. Floppy drive seek rates can also be set from within NeoDesk.

When copying disks, you can now specify a number of copies to make when copying from one floppy to another. If an error occurs during reading the source disk, the entire disk is read again.

Disk copying without formatting is also possible, provided the number of sectors per track on the destination disk is greater than that on the source disk. This means you can copy a nine-sector disk onto a disk that was formatted with ten sectors.

File copying has also been improved and speeded up. If an error occurs while files are being copied, any files which are in memory but have not been written to the destination disk can be automatically moved to the clipboard for safety.

The NeoDesk control panel can also be run as a program, simply by renaming it. There are also more functions for different computers, such as extra sound options for the TT/STE and various CPU cache controls for TT, Mega STE and

Formatting options have increased

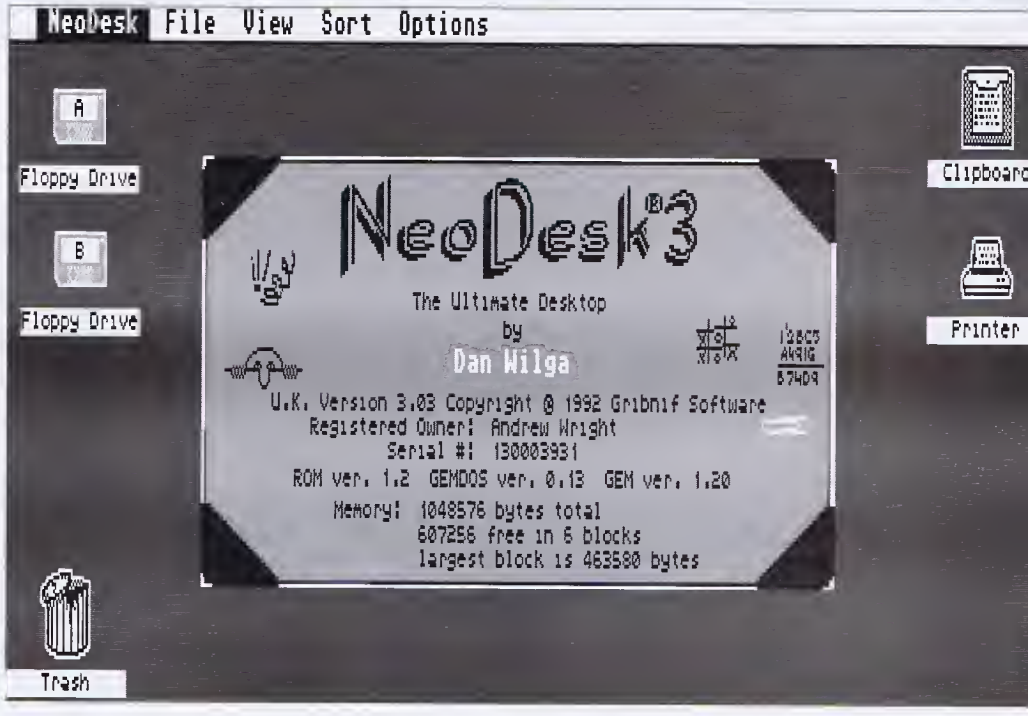
NeoDesk in mono – note the desktop notepad and different window displays

Adspeed owners. Sometimes it's the little things in life that add up to the best. In the new version of NeoDesk, when a folder is opened, the position of the window scroll bars are saved. When the folder is closed, the old scroll position is restored. This makes navigating round the Desktop much easier.

A Delete Item menu option has been added to make it easier to delete files and folders when the trashcan is hidden beneath open windows. It is permanent, however, and doesn't use the recoverable trashcan accessory.

The Show Information function works for multiple items on the desktop or in windows although if a large group of files is selected, each one has to be shown before you can get back to the desktop. There is no way out of the loop and the cancel button doesn't act as expected.

A quicker Show Information focility is also available. If the left Shift key is held, the total number of files in a partition or on o disk will not be checked, speeding up the process when you only want to know how much free space there is.



VERSTILE DIALDGUE

Show Information has much more functionality when used with executables and accessories. The dialogue allows you to set certoin flags, including the troublesome fastload bit that can cause so many problems on standard STs, whether or not to use TT fast RAM and severol MultiTOS-specific functions.

There are minor cosmetic changes to the Set Preferences dialogue too, including a second level of preferences under More.

The *.INF files option in the Set Preferences dialogue has also changed.

It now controls whether or not VDI graphics are used for a particular resolution. If the button under VDI is selected, then when NeoDesk first runs, it will load a different set of graphics routines from those it normally uses.

The VDI graphics mode must be used with extended graphics hardware like the Crazy Dots cord and the true colour modes on the Falcon. Screen accelerators like Warp 9 also provide a greater speed increose when NeoDesk is in VDI mode.

Some extra keyboard commands have been odded too, including Backspace to send a window to the back. If the Control key is held while double-clicking on a file on the desktop, a window will be opened to the path of the icon.

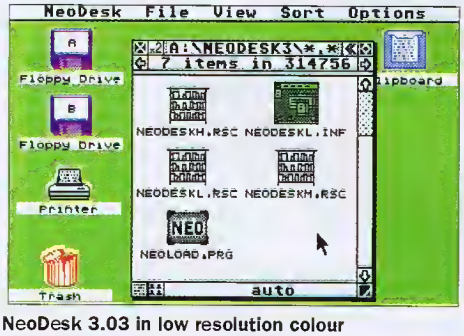
If the right Shift key is held, icons will never become de-selected. This is handy for repeating an operotion without having to select the icons again. It has to be said that some of the improvements were undetectable – especially the claimed increase in screen redraws using the new VDI graphics mode.

None of the benchmark programs I tried could demonstrote any difference and there were occasional problems when the screen failed to redraw ofter some accessories were used.

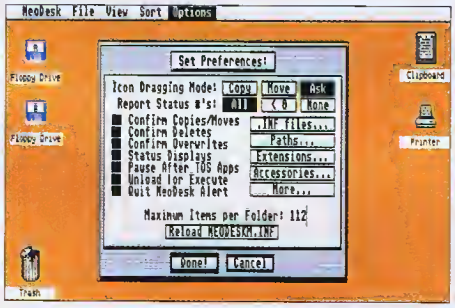
File copying wasn't noticeably faster either – when copying large blocks of data around, v3.03 appeared to be two to three per cent foster, but in most operations the difference couldn't be detected.

However, there's no doubt about the value of NeoDesk 3.03 overall. It's well worth the upgrade fee and if you don't already use it, it should be high on your wish list.

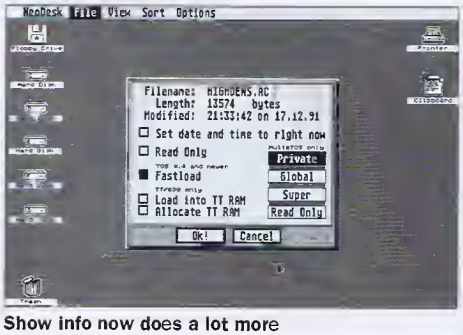
● *Turn over for a full review of NeoDesk CLI.*



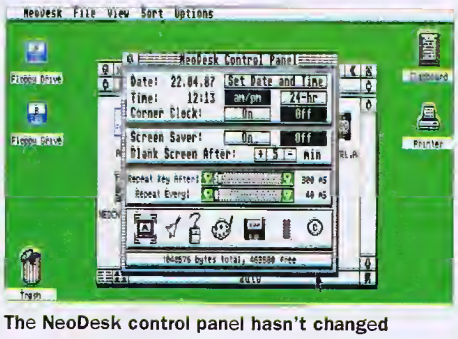
NeoDesk 3.03 in low resolution colour



Setting the preferences



Show info now does a lot more



The NeoDesk control panel hasn't changed

BOTTOM LINE

FEATURES

Still the best replacement desktop for the ST with even more features.

Excellent ● Good Average Bad Appalling

EASE OF USE

The changes are only documented in the accompanying text tile but most should be easy to tind.

Excellent Good ● Average Bad Appalling

VALUE FOR MONEY

Well worth the upgrade - and still worth considering it you're getting fed up with the GEM Desktop.

Excellent Good ● Average Bad Appalling

Product: NeoDesk 3.03
Supplier: Electric Distribution, Meadow Lane, St Ives PE17 4LG
Telephone: 0480 496575
Price: £40.81 (£4.95 for an upgrade
Configuration: All ST/STE/TT/Falcon models, 1MB recommended

Choosing a memory upgrade for your Atari ST?

The XTRA-RAM *Deluxe* is the answer!

Using industry standard SIMMs (like STE's) the XTRA-RAM *Deluxe* lets you upgrade all the way to 4Mb. It works with all Memory Management Unit (MMU) chip types, whether they are soldered down or socketed. If your ST has a soldered down Video Shifter chip or a 101601 type MMU chip then some soldering will be required.

Each XTRA-RAM *Deluxe* upgrade is supplied with a full two year warranty. Full technical support is simply a telephone call or letter away, whether you live in England or Singapore.

Atari ST Review: *"One of the best boards available for the ST."*

ST Format: *"The XTRA-RAM can be fitted easily ... even by a novice." 87%*

Deluxe with 0Mb	**£34.99**
Deluxe with 1/2Mb	**£59.99**
Deluxe with 2Mb	**£119.99**
Deluxe with 4Mb	**£189.99**

Plus **£3** Postage & Packing per order

Marpet DEVELOPMENTS

Searching for a reliable Clock Cartridge? The Forget-Me-Clock II is the original and best!

With the Forget-Me-Clock II plugged into your ST or STE's cartridge port, the system clock (used by the Control Panel) and keyboard clock will automatically be set at turn on or reset. No longer will you have to waste time setting your ST's clock each day.

Installation couldn't be simpler – you just plug it in and turn on your ST. With a full two year warranty, why not join almost eight thousand satisfied users?

Atari ST Review: *"A good, well engineered product. Get one now." 91%*

ST Format: *"The famous Forget-Me-Clock II Cartridge." 89%*

Forget-Me-Clock II Cartridge **£21.99**
Plus **£2** Postage & Packing per order

Buy the Xtra-RAM STE Memory Upgrade!

There are many suppliers of memory upgrades for STE machines. Not all cater for your particular needs. Most STEs require Single In-line Memory Modules, commonly referred to as SIMMs. A number of machines require SIPs – these are like SIMMs but use pins instead of an edge connector.

Each and every STE upgrade supplied by Marpet Developments contains all that is necessary to upgrade STEs requiring either SIMMs or SIPs. This is achieved through the use of a special adaptor. Many suppliers miss these out, causing undue hassle upon receipt of the product.

ST Format Rating: *"Easy to install." 86%*

XTRA-RAM STE 1/2Mb Upgrade	**£24.99**
XTRA-RAM STE 2Mb Upgrade	**£89.99**
XTRA-RAM STE 4Mb Upgrade	**£159.99**

Plus **£2** Postage & Packing per order

Spare SIMM/SIP Adaptors **£1.25** Each
Plus **£1** Postage & Packing per order

XTRA-RAM +8

Marpet Developments are pleased to announce their latest new product, the Xtra-RAM +8. Available mid to late April, this 8Mb board upgrades and STE; Mega STE or Mega ST to 12Mb! Specially designed and manufactured here in England, the XTRA-RAM +8 represents a considerable investment in the Atari marketplace. Each unit carries a full 12 months warranty and, with participating dealers only, is supplied under a ten day money back offer. For further information contact Marpet Developments today!

Unpopulated (0Mb)

STE	£109.99
Mega ST	£99.99
Mega STE	£149.99

Inc. VAT @ 17.5%
P&P £5 extra

Populated 8Mb

STE	£399.99
Mega ST	£399.99
Mega STE	£399.99

Inc. VAT @ 17.5%
Free Courier Delivery

- Upgrade your 4Mb STE; Mega STE or Mega ST to 12Mb!
- Supports use of Atari TT style memory allocation.
- Supports extended memory allocation in most professional applications.
- Supplied with auto-booting configuration utility.
- Installs beneath shielding on all machine types.
- Solder free installation on most STEs; Mega ST and Mega STE models; fitting service available.
- All versions available unpopulated (use SIMMs).
- Requires TOS 2.06 ROMs – support for earlier ROMs available soon!
- No payment processed until day of dispatch! Mastercard and VISA.

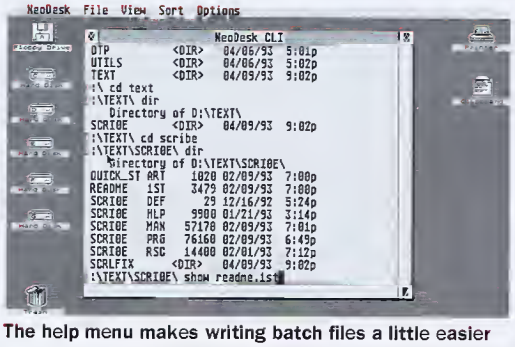
Meadowfield Farm, Fellbeck, Pateley Bridge HG3 5ET
Tel: +44 (0) 423 712600 Fax: +44 (0) 423 712601

All prices subject to change with or without notice. **E&OE.** All goods subject to availability.

MONEY BACK 10 DAY GUARANTEE

Second in command

To complement NeoDesk, the upgraded Neodesk CLI makes entering commands child's play, says Andrew Wright



The help menu makes writing batch files a little easier

The second string to Gribnif's bow is NeoDesk CLI v2.1. CLI is short for command line interface, a method of interacting with a computer that requires typing obscure commands ond parameters directly from the keyboard.

Primitive just isn't the word for this kind of interface – most of the earliest computers such as mainfromes and minis could only be tockled in this way until the ST and the Mac started to show the way forward in the mid 1980s.

That's not to soy that command line-driven computers are obsolete. Far from it. There are still millions of DOS-based PCs in the world and although the GEM-like graphicol front end Windows is slowly taking over, there ore plenty of users who want and need this kind of interface.

I've olways found it vaguely amusing that the company that put so much effort into creating the "perfect" desktop for the ST should also offer a product thot swaps the ST's graphical interface for an archaic command line format.

However, NeoDesk CLI is actually intended to complement Gribnif's colourful graphical environment, rother than replace it. It won't even work without NeoDesk.

It is designed to make repetitive tasks much easier and allows complex sets of instructions to be carried out much more quickly than would be possible using icons and windows.

CLI is supplied on o single-sided disk with two manuols, one covering the feotures in the original release and the second covering the features added in v2, a rather unsatisfactory situation.

An installation program is provided though getting started is pretty straightforword without it. The accessory is copied into the root directory and then installed in NeoDesk in the some way as the recoverable trashcan.

ADDITIONS

Version 2.1 is more of a bug fix release with some minor improvements and enhoncements of o technical noture. Upgrading shouldn't be o problem as batch files creoted with v1.0 will still work, with the odd exception.

The main improvement is a scrollbock buffer listing previous commonds and results. General improvements include output from TOS and TTP programs being displayed in the command line window, a new blinking cursor, o wider window up to 80 columns using the normal font, ond the ability to run the accessory as a NeoDesk program with the extender .NPG.

The editor itself has been improved with several new editing commands. The left and right arrows can be used to move from one end of the line to the other when used in conjunction with the Shift key. There are also some new wild cards and assorted changes to existing commands ond variables.

None of this, of course, tells the newcomer what the CLI can achieve. The CLI is best ot carrying out complex operotions. Consider this – I want to copy o collection of PostScript font files from one directory to another.

Using the GEM Desktop or NeoDesk, picking out only the files with a *.PFB extender would be hord work, espeoiolly if there were more than could be displayed in a window. Using CLI, I could type in a line similar to this:

```
COPY F:\FONTS\*.PFB E:\NEWFNTS\PSCRIPT\
```

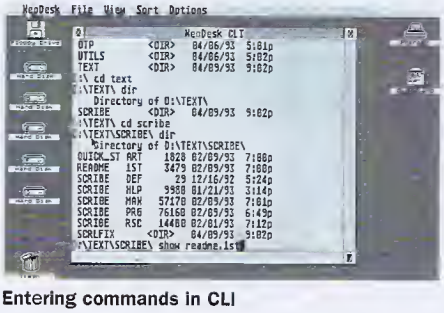
All the PFB files would be copied to a folder called PSCRIPT. What's more the some commond could be recalled, edited and then executed again.

If necessory, I could save the command as a batch file, a simple text file containing commands to be executed in sequence. It could then be executed by double-clicking on it from NeoDesk , dragging it onto the CLI icon or running the desk accessory and typing its name as a command.

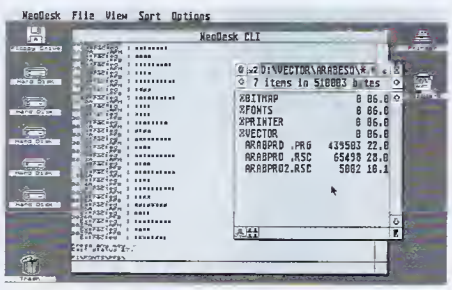
Or I could make the process much more complex still, including multiple extensions, IF...ELSE statements and interactive user input from the keyboard or mouse.

For the anorok who sweors by the command line os the only true interface, NeoDesk is likely to be extremely valuable. For the novice it's something best left well alone, not least because the manual is pretty poor in pointing you towards useful ways of using it.

If you're somewhere in the middle ground, searching for new ways to improve productivity, you might be pleasantly surprised by NeoDesk CLI. Although I'm by no means an avid user at this stage, I'll certainly be trying it out over the next few weeks to see how much more it can do.



Entering commands in CLI



Output from TOS programs is now shown in the command line window

BOTTOM LINE

FEATURES
Great for anoraks and experienced users but novices beware.
Excellent / **Good** / Average / Bad / Appalling

EASE OF USE
Aimed squarely at the beginner, and accordingly easy to use.
Excellent / Good / **Average** / Bad / Appalling

VALUE FOR MONEY
It undoubtedly adds power to NeoDesk and at a reasonable price.
Excellent / **Good** / Average / Bad / Appalling

Product: NeoDesk CLI 2.1
Supplier: Compo Software, 7 Vinegar Hill, Alconbury Weston, Huntingdon PE17 5JA
Telephone: 0480 4891819
Configuration: All ST/STE models, any resolution

Got anything to say to the ST community? Then this is your soapbox

Write Now

An unbiased view

After reading yaur article on the Falcon and the Amiga 1200 I would like to congrotulate yau far having the most unbiosed view I have ever read on this interesting subject.

However, you are still being a little unfair on the A1200. I own an A1200 ond a 1040STE, and program in ossembler on bath mochines, so I have a good ideo of what they ore capable of.

You state that the Falcon are full 32-bit architecture ond because it is clocked at a higher speed that the A1200 it will deliver higher performonce. But will it really?

The Amigo is clocked ot obout 14MHz ond the Falcon ot a faster 16MHz, but there is only one bus and it is shared between the pracessor and the blitter – I wauld alsa guess the DSP.

So if, for instance, you are using the blitter ta copy dota, the processor must either wait for the blit to finish or shore the bus, but the blit takes twice as long to complete and the pracessar only runs at half speed (8MHz).

And whot if the DSP uses the same bus, does thot slow the Folcon ta o crawl? Evidently, the clack rate argument seems a little redundont naw huh? But surely the Amiga suffers the same problem?

Well the Amiga also hos two custam processars – the capper and, af course, the infamous blitter – and they can only access the first 2Mb of memary.

These two pracessors rarely interfere with the CPU on an Amigo, but even when they seldom do, the processor can be running at the full 14MHz when the CPU is accessing data held in fost RAM. The result is no loss in speed ot all.

And os for os the DSP being more powerful thon all the Amigo's grophics processors, well hove you seen whot con be done with the copper chip on even o normol Amigo?

Split screen displays, multiple re-use of sprite DMA chonnels, chonging the polette on every sconlite, multiple resolutions an-screen ot once, mirror effects ond horizontal porollex scrolling.

The A1200 hos superior grophics, whot with Hom8 in 1,280 x 512 mode, which gives up to 262,144 colours on-screen ot once, and it only uses eight bitplones of screen memory.

HAM grophics ore so difficult to monipulote thot this mode would be no good in on orcode gome, olthough the A1200 is, I think, the superior gomes mochine. The Folcon scores over the Amigo in the sound deportment, eosily though, by hoving 16-bit sound ond ADACs built in os stondord, not to mention Midi parts, which I con't believe Commodore hoven't included in the A1200.

Don't get me wrong, I reolly like the Folcon and if it daes toke off then I plon to try ond get one. Until then I'll stick with my 2Mb A1200 ond STE.

Francis Bullen, Glasgaw

We make aur reviews and features as unbiased as passible, especially when readers cauld spend hundreds af paunds an the back af a recammendatian.

It is all taa easy ta laak at praducts thraugh rase-tinted glasses, but Atari ST User has a clear palicy af telling it haw it is.

Width disappointment

I om writing to complain obout the size of your new style mogozine. The width hos reduced by over half an inch.

I have always bought your magazine and have storted subscribing, but I am surprised ot your latest mave. This makes you the smallest ST magazine in the shops.

Why not reduce your price as you can't fit as much information in as yau could before? Apart from this I like the mag. Keep up the good work.

James Aubrey, Surrey

There is an ald saying, James, that it's not the size af the wand that matters but rather the magic within it. That's certainly the case with Atari ST User.

We save very little cash by publishing the magazine on standard A4 paper, but I'm sure yau'll agree it feels a much better publicatian.

Judging by demos

I om writing to commend you on the inclusion of demo pragroms on yaur CaverDisks.

No matter how good your reviewers moy be, their own personol likes ond dislikes inevitobly colour their ossessments of a progrom.

Demo progroms, especiolly those of serious softwore, are voluoble in providing the feel that is often the deciding foctor in the decision to buy. It's got to be good too for the softwore houses.

Here in New Zeolond it oppeors thot Atari have obandoned us completely, ond I doubt if users in Australio are any better off.

Users here are, therefare, almost totally reliant on magazine for information and reviews, and on mail order.

Could I take this opportunity to make o plea to mail order firms? If you are interested at all in exparting overseos then you must make provision far payment by internotional credit cards.

It's just hopeless trying to find the correct amount ta nominote for on overseas bank draft, ond besides it costs us an extra $10. If yau don't provide this facility you'll just miss out.

Keep up the good wark, *Atori ST User*!

Alwyn Janes, New Zealand

Agreed, there is na better way af judging saftware than ta try it far yaurself, and this is sametimes passible thaugh aur CaverDisk demas.

There are many mare pragrams released that aren't included an the disk far several reasans, and yau shauld be able ta trust aur views an them.

The vast majarity af aur reviewers are full-time jaurnalists, and they have a great deal af experience in picking the gaad fram the bad and making the right recammendatians.

But, af caurse, there are situatians when persanal likes and dislikes came inta the equatian – the feel af a mause, far example.

Programming tips shared

£10 Prize Letter

I hove just storted o non-profitable Atori user group for progrommers which enobles members ta get together and shore knowledge, tips ond odvice on oll known ST longuoges.

The club lets progrommers test eoch others' work on oll types of ST – on involuoble service you will probobly ogree.

I om therefore writing to you os o leoding publisher in the ST morket in the hope of securing o relotionship between the user group ond the medio.

I om sure thot you ore constontly osked questions thot relote to pragromming issues thot you unfortunotely don't hove the resaurces or time to deol with.

A user group like us con, ond I wauld be groteful if you could mention the group to those yau ore unoble to help.

Members will olso produce higher quolity public domoin progroms, ond thus possible CoverDisk moteriol in the future.

Our group coters for oll ST progromming longuoges, ond for oll levels from beginners to more odvonced progrommers.

There is no membership fee – oll the user hos to do is send o disk ond return postage. The some disk is used to return the disk-bosed mogazine.

Nichalas Bates, Ictari User Graup, 3 Bernice Clase, Plymauth PL4 7HL

Gaad luck with the graup. With a bit af luck it will encaurage mare pragrammers ta release saftware inta the public damain.

Whenever this is the case we are happy to hear alternative views from our readers, and we try and publish as many as possible.

Supporting shareware

I am writing ta yau to show my appreciation far my campetitian prize fram yaur January 1993 issue. The prize was £300 af camputer equipment of my choice from First Computer Centre.

When I rang up far canfirmatian I was immediately put thraugh ta the manager, Mr Brian Cabley, wha was very caurteaus and helpful, and sarted my arder withaut ony fuss.

I wauld like ta thank them far all their help.

My other reason for writing is to osk people to support shareware authors. Part of my prize was a modem which included a cut-down version of Freeze Dried Terminal.

Before using the software I used o public domain terminal program which wos adequate but when I loaded this new ane I was instantly converted.

The progrom is almost complete with only a few utilities disabled or cut-down, and for only £15 the full program is made available via a software key.

Needless to soy I hove sent off my registration fee. It is better than oll the cammercial terminol programs I hove seen – even on PC clones – ond at o fraction of the price.

If you don't help the authors of shareware then you will lase out on great software, and the demise of the ST is then assured. Help them to help you, or reap the consequences of bad karma.

Again thank yau *Atari ST User* and First Camputer Centre.

John Caten, Southend

Shareware is a brilliant way af buying software, and ane which we fully endarse. There can be no better way of picking up new pragrams than to try them before yau part with maney.

It will nat continue as an alternative ta full price software unless users pay the authors the small registration fees asked.

Bashing the consoles?

To say that the STFM is aimed ot the booming console market is nonsense. How can Atari expect this machine to compete with the likes of the Mego Drive or SNES?

Both hove 16 colours on-screen ot ony one time, and both have stereo output. It wauld make more sense for Atari to keep the STE and reduce that machine's price.

A year ago I upgrade my STFM – thot I'd had for just over four years – to a Mega STE which took nearly three months to arrive from the time it was ordered. I realise now what a dreodful mistake I made. Don't get me wrang, it's o wonderful piece of equipment, but just o few months after it hod been released it was dropped. All we heor obout now is this new all-singing, all-dancing Falcon. Will it put Atari back in the limelight that they much deserve? I daubt it very much. On a lighter nate, I'm trying ta abtain Infacam's Suspended. Is there any reader aut there willing to sell me their capy – I'm prepared ta pay a gaad price.

David Rogers, Both

Of course the reintroduced 520STFMs have no chance of hitting console soles if the buyer has his or her mind fixed on playing games and nothing else.

But the STFM can be used for much more – wordprocessing, home accounting, and o ronge af other productivity applicotions. Parents could see it as on educotionol tool for their children.

So there is a big opportunity for console buyers to be educated an the advantages af chaosing a machine with a keyboard and much lawer-priced games saftware.

The situation you find yaurself in with the Mega STE is regrettable, althaugh it cauld have been foreseen. When yau baught your computer we were already reporting Falcon.

Althaugh Atari denied its existence, it was obviaus that a computer with some autstanding features was waiting in the wings and many af the rumaured specifications materialised.

If anyane affers a capy af the game, we'll forward their details ta yau.

Australian Falcon gossip

I list below some of the interesting items about the revolutionory Falcon which I have come by in one of the latest issues of the Porogon Report, o publicotion from Western Australia.

Because your magazine arrives several months lote, I have just received the Jonuory issue and this informatian might have already be printed.

A joypad controller is being developed for the Folcon thot uses the onologue ports in the side of the machine. It will have 16 programmoble buttons as well as three Fire buttons plus pouse and reset.

A French company is developing an onimation player that will allow true colour animation in real-time combined with CD quality sound, all running as a desk accessory. Kodak have been warking for some time on o package that will give the Falcon photo CD capabilities. The comero soves photogrophs in digital format, which can then be looded into the Folcon ond edited in true colour mode.

Atori have tied up the rights for seven new Warner Brothers movie releases for the 1993-1994 season. These titles will be released for the new Atari Jaguar, rumoured to be o 64-bit gomes machine.

Thanks for a great magazine, especially the CoverDisks, but would it be possible to supply a converter which changes different picture formats?

Will Mondarin make a STOS for the Falcan030 and 040 machines?

Martin McMahan, Australia

Thanks far the gassip, Martin. I presume some of the reports, such as Jaguar releases, remain rumaurs because Atari are keeping quiet on their praducts under develapment.

But we have naw been told af 80 products under develapment far the Falcon, and ane of them is a Falcon version of the STOS programming package.

We'll try to find a decent picture converter far a future CaverDisk.

Waiting to hear from you...

To join the ST chat show drop a line to The Editor, Write Now, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP

ATARI ST USER

It's not what you know – it's who you know!

TECHNICAL PROBLEMS

We are happy to answer your technical problems in our Advice Service section. Send your letters to **Advice Service** at the address below

NEWSDESK

If you have a news story, send it to **John Butters** at the address below. If your story is URGENT call him on **0625 878888** during office hours

GALLERY

We are always on the look-out for good ST art. Send your work to **ST Gallery** at the address below

WRITE NOW!

Got something to tell other *ST User* readers? Send your general letters to **Write Now!** at the address below

COMPETITIONS

Enter competitions using the details on the form. If you have any enquiries connected with our competitions, contant **Lucy Oliver** an **0625 878888**

PUBLIC DOMAIN SUBMISSIONS

PD libraries are welcome to submit their latest releases. Submissions should include a detailed list of what each disk contains. Jiffy bags to **Darren Evans**

ASPECTS

Our Aspects authors can be contacted via Atari *ST User*. Please mark any correspondence clearly and send it to the address below

ADVERTISEMENT QUERIES

If you have a query with one of our advertisers please contact **Barbara Newell** an 0625 878888 ar write to her at the address below

COVERDISKS

If your CoverDisk is faulty send it to: **Stanley Precision**, Unit F, Cavendish Courtyard, Sallaw Raad, Welldan North Industrial Estate, Carby, Narthants NN17 1JX

SUBSCRIPTIONS & BACK ISSUES

To subscribe ar order back issues please use the form at the back of this issue ar call **Europress Direct** on 051-357 1275. Please note we only hold back issues for six months

COMMENTS

If you have a camment about the editorial content af *ST User* please write to the Editor, **John Butters**, at the address below

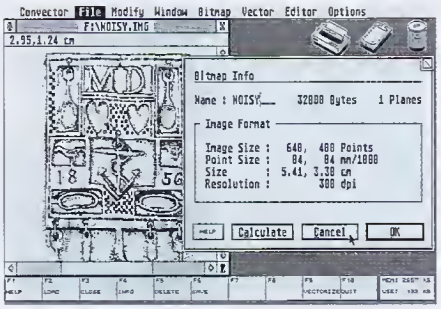
TELEPHONE CALLS

Except in the situations listed above we **cannot accept telephone enquiries.** Please write in to one of the departments listed in this panel

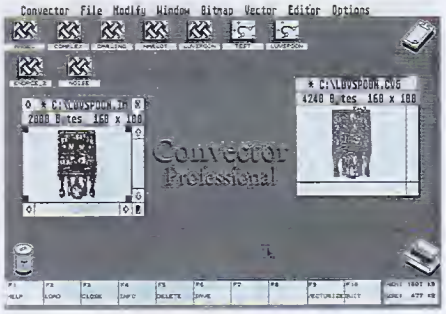
SAVE THOSE SAEs!

Please don't send us SAEs, we can't promise to reply to every letter so it really is a waste af your stamp. Sarry!

ATARI ST USER
EUROPA HOUSE
ADLINGTON PARK
MACCLESFIELD
SK10 4NP



Detailed information from a pull-down menu



Convector's friendly interface

Dots to dashes

Andrew Wright looks at the newest bitmap to vector converter around, Gribnif's Convector Professional

With the growth af DTP an the ST, it didn't take lang for many users to realise that there were severe limitations to the use of bitmapped clip art.

It is the easiest format to source – whether from PD libraries whose catalogues boast hundreds of disks full of clip art or by scanning with a simple hand scanner.

If you want to print out a bitmap image, whether it's a 9-pin dot matrix or a laser printer, the optimum size of the imoge (the size at which it will retain its original appearance) will depend an the resolution of the output device.

It will actually appear smaller on a laser but if you then enlarge it, it will look very blocky indeed as the effective resolution drops as the size goes up. Even the smallest alteratian in size can creote jogged edges and unsightly blocks of pixels.

Do the same with a vector graphic and it will appear at the same size whether you're printing to 9-pin or a 2,540dpi typesetter. It will still look a little jagged on the 9-pin but on a laser or typesetter it will laak much cleaner and sharper.

SMOOTH LOOKER

It can be resized at will ar even skewed and distorted, but it will still maintain its smooth appeoronce.

Vectar graphics also take up much less space on a disk. For simple images, vectarising can reduce the space required to as little as five to ten per cent of the original although the percentage rises with the complexity of the image.

Thirdly, a point that is often ignored is that minor adjustments can aften be made more easily by moving points and reshaping lines thon by moving individual pixels.

However, good quality vector clip art, in complete contrast to the bitmap variety, is a lot harder to get hold of. Enter the auto-tracing program ar vectoriser – it can take a bitmap image and by using a set of cleverly devised algorithms, turn it into a vector graphic. Convector Professional is the latest auto-tracing program to reach the UK market. It is supplied an a single double-sided disk with a 69-page, A5 ring-bound monual. It will work on any ST/STE computer in either medium or high resolution, as well as the TT and systems with odd-on grophics cards.

Although it will laad and run an 520s, 1Mb or more is recommended, especially for large imoges.

An installation routine is supplied for first time installation, which requires entering personal details, but on subsequent occasions the program can be copied onto a working disk in the normal way. It will work as well on floppy-based systems as on a hord disk.

One of the more unusual aspects of Convectar is that it will run as a normal GEM program or as a desk occessory. When running as a desk accessory, it can be called from within DTP programs or graphics programs like its sister program Arabesque.

It can even grab the underlying screen, either progrom or GEM Desktop, and save it as a vectar graphic. Hawever, there's no menu bar or icans, obviously, and remembered keyboard short-cuts have to be relied on.

When used with Arabesque it can vectorise the buffer or the entire image, though a lot of memory is needed to run it realistically as a desk accessory in this way. Even with a 4Mb ST, I ran aut of memory on several occasions.

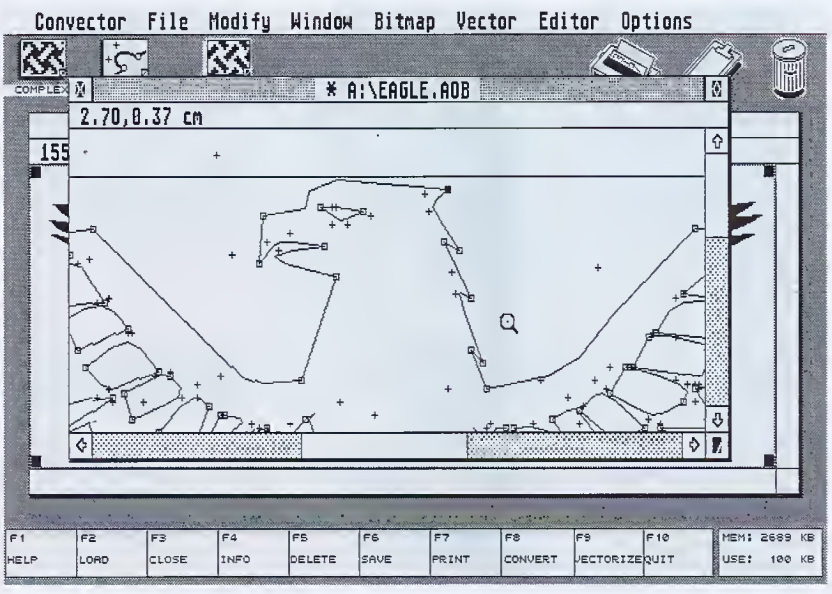
Convector is o little reminiscent of Firstword Plus or K-Data in its appearance, with a function button bar along the bottom of the screen representing the ten function keys, a desktap with three icans and a GEM menu bar along the top.

It is a friendly program to use in more than one respect. Dialague boxes, which can be moved around the screen, have their own set of keyboard short-cuts – the Help key accesses a help screen for that particular dialogue while there are Alternate key combinotions for the other options.

There is olso on online help function, accessed via the GEM menu bor. When it is turned on, clicking on any menu item produces the correspanding help screen.

The program is quite straightforward and yau can be vectorising within minutes. Essentiolly it works by loading a bitmap image into a GEM window.

You can then select a rectangular block ar the entire image for vectorisa-



A neatly vectorised image

Vectorised version appears in another window

tian. Faurteen impart types ore recognised including IMG, ABM (Arabesque), PCX, BLD (Megapaint), IFF, TIF, NEO ond Degas, althaugh I had a lat af trauble importing same TIFF files which warked with everything else.

It's warth nating, hawever, that anly mano images can be vectarised in the current release.

The bitmap can be madified in severol woys befarehand – it can be clipped, inverted or contaured. Even stray pixels can be cleaned up using the naise filter, which is useful far scanned bitmaps.

When the GEM window is closed, an ican with the nome af the image appears an the desktop sa that it can be looded stroight back again if needed. It mokes warking with several images is very easy ond the pragram can hald up ta 16 bitmap images ond vectar graphics, depending on memory.

Once the bitmap has been vectarised, it appears in anather GEM window ond it too can be icanised thaugh with a different type af ican. The original bitmap is displayed in medium grey behind the vectorised versian sa that yau can check the accurocy of the trace.

GRAPHICS SWAPS

Other desktap icans include the printer – GDOS must be installed ta use it – and the clipbaard which enables graphics ta be swapped between opplicatians using the Atari System Clipbaard.

The main pawer of the progrom, hawever, lies in the steps yau can take immediately befare vectorising on image. There are twa cansecutive diologue boxes with adjustable parameters ta enhance the final result. Happily o lot of thought has gane inta the default settings and they should prave suitable far mast jabs.

Polygons ond lines con be used if speed is required but far best results the Bezier curves aptian is essential. The vectarisatian pracess is quite complex – first the cantaurs af the graphic are created in memary, the palygan lines are drawn in and then turned inta smaath Bezier curves.

The palygans and Beziers can be made very caarse ar very fine – ar any value in between using the slider bars in the main options dialague bax. Other aptians that can make a difference are carrected carners (missing carner pixels are ignared) and precisian.

A caarse precisian setting means that the trace might not follow the image clasely while a fine setting will ensure a gaad fit. The lotter will take many times langer sa the five different precisian optians will came in handy.

Fine settings shauld be used far small imoges with plenty af detail while o medium to caarse setting might be preferred far a large, simple graphic.

Althaugh Canvectar staps short of being a vector graphics package, when the vectarising is aver there are several facilities far finishing aff. Graphics campased af a number of smaller objects ar paths can be jained tagether ta farm o whale, or maved and deleted.

Canvectar can alsa sove groups af graphics such as a character set, saving each as a CVG file in a speciol indexed falder. In this way, o complete font con be scanned in, vectarised and then turned inta a Calamus font using an editar like Genus.

Vectar graphics can be saved in seven farmats, AOB (Arobesque), CNV (Canvectar's awn), GEM, GEM/3, CVG, EPS and VEK (Megapaint Professianal).

Megopoint symbal files are alsa supparted. It's the first program I've came ocross on the ST that handles EPS files reliobly – I was able ta laad several inta ather PC and Mac applicatians as well as PageStream.

Canvectar has certainly upstaged the likes af Didat LineArt ond DA's Vectar, placing itself firmly at the top of the ST's outo-tracing ladder. It's wealth af extra functians and ease af use makes it an excellent chaice.

It is cleorly intended to camplement Arabesque but its suppart far a wide range af file formats means it will wark with just abaut any DTP ar graphics packoge.

How the competition fares

Althaugh the ST market isn't exactly awash with auta-tracing pragrams, there is enaugh chaice for mast people. Convector is the only program with vectorisatian as its prime function – all the athers are vector graphics pragrams ar cambinatians like Silhouette.

Silhouette comes in at around half the price af Canvectar (£60). DA's Vectar is just that bit more at £149 while Didat LineArt, the top end package will set yau back nearly £300.

However all three competitars affer a lat mare besides – Silhouette is a combined bitmap/vectar pragram and the ather twa can create vectar graphics as well as trace bitmaps.

To demanstrate that there's vectorising and then there's vectorising, we've put the same images thraugh two ather campeting packages, timed the results and compared the final autput.

The difficulty here is that there are sa many changeable parameters invalved that it's hard ta get a fair camparisan. Far that reasan we carried aut the tests on three different images at the best settings we cauld find.

Far a better idea af haw the packages themselves campare, take a laak at this manth's graphics raundup.

Pragram	*Canvectar*	*Silhauette*	*DA's Vectar*
Simple image (secs)	18	25	22
Camplex image (secs)	203	76	140
Naisy image (secs)	403	161	647

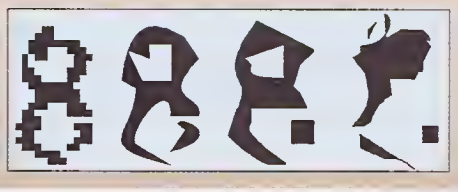
The simple image was a scanned character. All three pragrams carried aut the trace quickly and the results were very similar.

The secand image was mare camplex with curves and fine detail. The third, the naisy image, was a paar quality scan with stray pixels all aver the place.

Nate that Canvectar has the facility ta remave same af the naise, making the end result better still, but far the purposes af this test, the facility wasn't used.

Silhauette was significantly faster at tracing the mare camplex images but the quality af the finished graphic is much lawer, as can be seen fram the accampanying example.

Bath Canvectar and DA's Vectar taak their time but Canvectar was the winner by a whisker as the resulting graphic was slightly mare accurate and the filled areas were naticeably thinner than thase produced by DA's Vector.



Part of the "noisy" image. From left to right, the original bitmap (only 20 pixels high), and the vector graphics produced by Convector, DA's Vector and Silhouette respectively

BOTTOM LINE

FEATURES

Excellent range of features that sets new standards on the ST.

Excellent
Good
Average
Bad
Appalling

EASE OF USE

Lovely interface – precisely what the ST is all about.

Excellent
Good
Average
Bad
Appalling

VALUE FOR MONEY

A bit pricey for the casual user but a very worthwhile investment for the desktop publisher.

Excellent
Good
Average
Bad
Appalling

Product: Convector Professional 1.00J
Supplier: HiSoft, The Old School, Greenfield, Bedford MK45 5DE
Telephone: 0525 718181
Price: £129
Configuration: All 1Mb ST/STE models with med or hi-res

L.A.P.D

Quality P.D. for the Atari ST/STE 80 Lee Lane, Langley, Heanor, Derbys, DE75 7HN
Tel: 0773 605010/761944

★ PD disks: £1.50 each ★
★ BUDGET RANGE PD DISKS ONLY £1.00 ★
★ Budgie & Shoestring Licenceware disks £2.95 and £3.95 ★
★ Commercial Games Software from only £2.99 ★
★ Same day service, quality virus free disks ★
★ PLEASE ADD 50P P&P ON ORDERS UNDER £5.00 ★

All disks below, £1.50 unless otherwise stated

GAMES

G.284 BIO-HAZARD: Two levels of brilliant Sci-Fi 'Dungeonmaster/Captive' game. S/W.
G.281 PSYCHO PIG: Platform shoot 'em up with Rambo-esque pig. (2 disks £3.00). S/W.
G.280 COLOR CLASH: Adventure/Maze game with puzzles by Animalsoft. S/W.
G.279 OPERATION GARFIELD: Frantic 'Operation Wolf' type shoot 'em up action. (STE).
G.262 ALIENSI: Space Marines v. Aliens. Strategy combat game.
G.268 MEGALINE: 1Mb. "Tron" light cycles game for 1-4 players.
G.269 QUIZMASTER: Multi choice answer general knowledge quiz.
G.266 WITCHES, MICE & FAIRYTALES: Games for younger users.
G.251 FATEMASTER: Fantasy/SciFi Arcade adventure. S/W.
G.258 GALACTIC FRUIT BOWL: Trivia quiz meets the fruit machine. 1Mb.
G.247 MEGAPEDE: 1Mb. Excellent reworking of the arcade classic. S/W.
G.250 CYBERNETICS: Good, challenging 'Defender' type arcade game. S/W.
G.237 CHAOS: Madcap game of battling wizards by Martin Brownlow (1Mb or .5Mb).
G.246 HYSULA: A graphic 3D fantasy adventure set in the world of Hysula.
G.227 IBS GUARDIAN: Sci-fi game in which you command a space battle-cruiser.
G.235 MYSTERIOUS REALM: Fantasy text adventure with graphics by Peter D. Ward.
G.197 DUNGEON LORD: 3 levels of 'Dungeonmaster' type adventure from the States. 1mb
G.221 GRAV 2: Follow up to highly praised 'Oids' type rotate and thrust arcade game.
G.198 OMEGA: Large and complex wilderness an d dungeon fantasy exploration game. 1Mb.
G.217 THE MAZE: 3D adventure game loosely based on 'The Crystal Maze'. D/S
G.222 GRANDAD AND THE QUEST...: 3D graphic adventure by Ian Scott. Shareware 1mb
G.80 TETRIS & PILE UP: Two very good versions of the 'Tetris' arcade game.
G.234 COUNTOUT: Word puzzle game similar to Channel 4's 'Countdown'
G.230 OBSCURE NATURALIST: Challenging, commercial quality, adventure with graphics.
G.224 MRS. MUNCHIE: Pacman clone from the United States. 1mb D/S
G.225 CAILYNVORN: Large, multi-character fantasy game in D&D style. D/S
G.201 BLAT!: Good, three-in-row falling block game with added features (STE only)
G.115 MYSTIC WELL: Complete Dungeonmaster type adventure with save facility.
G.197 ANARCHY ACADEMY: Ex Commercial 3D adventure, now released as shareware.
G.159 VIOLENCE!: Classy vertical scrolling Xenon style shoot'em up (Shareware)
G.171 HACMAN II: 1 megabyte version of Pacman, 100 new levels! D/S
G.172 HERO II: Detailed, graphic role-playing adventure. (1mb required)
G.173 PENGUINS: Move your penguins around the screen 'Lemming' fashion.
G.208 FAST FREDDY: 'Cute' arcade action as Freddy tries to save his girlfriend.
G.140 A NIGHT ON THE TOWN: Meet the girl of your dreams...and the rest is up to you!
G.131 STAR TREK - THE GAME: Defeat the Klingon threat to the galaxy. (1mb D/S)
G.150 COLUMNS I & II: 2 good games similar to 'Tetris' by David Tierney. (1mb) D/S
G.148 OZONE: Superb platform-arcade game.
G.10 VEGAS: Roulette, poker, blackjack and slots ... without the Nevada sand!

BUDGET PRICE DISKS - ONLY £1.00 each!

B.54 CENTIPEDE: Good arcade conversion.
B.53 LAZER BALL: Lazer reflection puzzle game.
B.50 STAR TREK: Save the Federation
B.51 COLOSSAL CAVE: The original adventure
B.45 FIGHTING SAIL: Naval battles
B.44 FLY ROBIN: Cute shoot 'em up
B.42 CYBERSNAKE: Top rated action game
B.39 ASTEROIDS: A loving restoration
B.15 ROLL'N'NUDGE: Fruit machine
B.20 HACMAN: Pacman action
B.14 ROBOTZ: Classy arcade game
B.36 8 BALL POOL: Bar game simulation
B.33 BLASTER: Fast 'Defender' action
B.34 LAPD GAME: Shoot 'em up

DEMOS

D.360 DREAMZONE: Mega Demo from the Wild Boys (2 disks, £3).
D.356 CHOOROUTE: Multi-parter by Adrenaline of France.
D.341 DIMENSIO: Finnish party demo from the condemned. D/S
D.347 COSMIC JAM: Good multi-vector demo from Imagina of Finland D/S
D.346 BIRD MAD GIRL SHOW: Multi-screen demo from French crew, Fraggles. D/S
D.330 NUTHOUSE: Biggest house music demo yet. 18 minutes of digi-music! 1mb D/S
D.328 IMAGINATION: Demo with 'Cadaver' style 'menu' by the Dynamic Duo. D/S.
D.326 OVERDRIVE: Plasma Fractals, Glenz Vectors, etc by Aggression. D/S
D.325 NTM DEMO: Mega demo from Zuul with arcade shoot em up (2 disks £4.00)
D.324 CROSSBONES: STE demo (also known as RED SECTOR DEMO)
D.335 PANDEMONIUM: Very good mega demo from Chaos. D/S
D.312 LIGHT SPEED: Super demo from the Untouchables and friends. D/S
D.302 STUPENDOUS: Excellent multi-screen demo from the Pixel Twins. D/S
D.348 MANIC: By the Opposition. Drive little car to find the screens. D/S
D.347 HAWKZONE DANCEFLOOR: Sample house music by The Wild Boys. D/S
D.323 SLAM - HARDCORE DANCEFLOOR II – More house music from the Wild Boys. D/S
D.272 THINGS NOT TO DO: Humorous animations by Electronic Images. D/S.

MUSIC

S.95 HIGH FIDELITY DREAMS: 8 super pieces of music from Auro. D/S
S.87 IMAGE FACTORY DIGI-SYNTH I: Ripped Amiga mods with 'Lemmings' menu D/S
S.86 RIPPED CHIP MUSIC: Numerous pieces of chip music ripped from demos, etc.
S.85 LONE WOLF SAMPLES: Voice and instrument samples for the TCB Tracker. D/S
S.70 MAD MAX CHIP MUSIC: 35 pieces of sound chip music from Mad Max. D/S
S.63 WAVEFORMS: TWB DIGISYNTH 3. More music files from the Wild Boys. D/S
S.8 NOISETRACKER: Soundtracker .mod player with eight starter tunes. D/S
(Large selection of .mod music files available, see catalogue for details.)
S.3 ACCOMPANIAST: 16 Voice Henry Cosh sequencer (full instructions on disk)
S.19 ALCHIMIE JR.: Impressive Swiss multi-window, multi-task sequencer. (1mb)

UTILITIES

U.53 TERADESK: Replacement desktop.
U.37 PREMIER PACKERS: 13 of the best program packers, plus a de-packer. D/S
U.14 HITCH-HIKERS DISK: Superb selection of handy utilities. D/S
U.42 PICTURE HUNTER: Rips picture screens from other programs.
U.44 THE DUPLICATOR: High speed copier program.
U.47 PROBE ST: Handy utility. Grabs music/graphics, disk/memory editor, etc.
U.23 DOUBLE SENTRY: Impressive accounts package for the small company (no VAT)
U.35 PICTURE CONVERTERS: Convert any format to just about any other format.
U.34 SAGROTAN: Super virus killer to protect your disk collection D/S
U.52 VAULT & TURTLE: Hard disk back-up utilities.

ART & GRAPHICS

A.70 COMIC BOOK HEROES: 22 Neo pictures of your favourites.
A.54 ART OF DUNGEONS & DRAGONS: Superb collection of pics from Dragonlance. D/S.
A.58 ART TUTOR: Complete first level of 'how to do it' package.
A.47 PICTURE CONCEPT: Produce weird and wonderful effects on your own pictures.
A.46 ELECTRONIC IMAGE ART PACKAGE: Very good art package from Offworld Software.
A.45 CRACK ART: Excellent German art program that loads many formats. D/S
A.36 KOZMIC 2: Stunning psychedelic pattern creator. See it to believe it (1mb)
A.1 ANI ST: Commercial quality animation program (once cost £60.00 to buy!)
A.30 FULL SCREEN: Display your pictures in stunning fullscreen format! 1mb D/S

PROGRAMMING

P.37 HEAT'N'SERVE SOZOBON: A friendlier sort of Sozobon. D/S
P.36 UNT SOURCE £1: Handy routines from the Untouchables, TPT, etc. D/S
P.24 MENU-MAKER: A French program that allows you to make your own menus with music, sprite and scrolling message. Excellent. D/S
P.35 JC MEGA MENU: Menu maker with smart fonts, music, program selector, etc.
P.33 ZX SPECTRUM EMULATOR: Emulate the old Speccy on your ST/STE. (1mb)
P.17 68000 PROGRAMMING COURSE: 10 'How to do it' document files. S/S
P.19 GFA EXPERT: Massive text file and help routines for GFA-Basic 3.0. D/S
P.18 STOS TUTORIAL: Helps make clear some of the STOS commands.

MISCELLANEOUS

M.135 CROSSWORD CREATOR: Design your own puzzles.
M.111 NORTHERN & EQUATORIAL STAR ATLAS: Superb serious astronomy program S/W.
M.114 FRANGLAIS 3 & 4: Two popular French tutorial programs.
M.106 ACCOUNT-ABILITY: Fully featured accounts program. 10 accounts, 2,000 transactions!
M.112 ASTRONOMERS GUIDE: 1160 stars, down to mag. 4.75 plus deep sky objects. STE only.
M.110 ELEMENTARY GERMAN: Shareware version of German tutorials.
M.107 RAMWORLD: Three dimensional object creator and viewer program.
M.77 THE BIBLE: King James authorised version. 4 D/S disks/£6.00
M.19 AIR WARRIOR: Flight sim with World War II aircraft.
M.76 FORM-FINDER: Proven horse race analysis and prediction program.
M.84 ASTRO 22: An accurate astrology calculation program.
M.81 NEWSDISK: Construct your own newsletters and magazine disks.
M.103 ULTIMATE CHEAT GUIDE: 320+ game cheats, plus hidden screens on 20 demos!
M.1 PLANETARIUM: Excellent, easy to use, astronomy program.
M.86 FILOFAX: Electronic notes - diary, caller ids, alarms, addresses, etc.
M.26 GENEALOGY: 2 programs for the family historians to trace their forebears.
M.20 G.C.S.E. STUDY AIDS: Help with Algebra, Trigonometry and Geometry.

KIDS EDUCATIONAL

M.95 ABOUT THE HOUSE: Excellent collection of programs for young children. D/S
M.94 PROFESSOR CLEVER: Maths tutor program for children aged 5 to 11. S/Ware D/S
M.41 GEOGRAPHY TUTOR - EUROPE: Facts and figures on the countries.
M.104 SOLAR SYSTEM GEOGRAPHY: Effects of the sun & moon, on tides, seasons, etc.
M.67 BODY SHOP: Quiz type human anatomy tutor - the knee bones connected to....
M.105 MAGIC SPELLER: Computer speaks the word and challenges child to spell it.
M.16 KIDZ COMPILATION: Kid Graph, Gnd, Music, Notes, Piano, Publisher, sketch and story ... all on one disk!

SHOESTRING EDUCATIONAL SOFTWARE
(£2.95 each)

L.01 ROBOT MATHS: Maths tutor for children aged 6+.
L.02 MOON LETTERS: Spelling game for ages 5+.
L.03 PICTURE MIX: 'Jigsaw puzzle' type game for ages 6+.
L.04 ROBOT WORDS: 'Hangman' brought up to date.
L.06 ALPHABET MIX: Simple 'jigsaw puzzle' type game for early learners.
L.10 DROP DOWN WORDS: Spelling/memory game for youngsters.
L.12 MATHS FUN 1: Latest Shoestring title for children 4 to 7 years.
L.13 MFL - FUN LEARNING: Word puzzle game similar to 'Logic'

COMMUNICATIONS

C.7 VANTERM V.4: Excellent multi-function comms program.
C.11 BBS: Three BBS systems - Citadel, Starnet and Mini-BBS.

BUDGIE U.K.

Full range of BUDGIE U.K. software available including the following:
BU.113 FOOTBALL TACTICIAN: 1st Div. football game for up to 24 users! (£2.75).
BU.112 GO-MOKU: Ancient Japanese board game against computer or friend. (£2.75).
BU.111 INTERNATIONAL CRICKET II: Animated 3D game (£2.75).
BU.105 DOMINOES: Uses all standard legal moves. 1 to 5 players. (£2.75)
BU.104 JETPAC: Avoid and collect arcade game from Pete Whitby. (£2.75)
PRO.20 VIDEO MASTER: Excellent video titling program. (£2.75)
BU.50 SPACE INVADERS: Classic arcade action by Robert Leong. (£2.75)
BU.90 MATCH IT: Possibly the most addictive game ever devised. (£2.75)
BU.89 HORSE RACING SIM: Quality sim from the sale ring to the track. (£2.75)
BU.71 DARK WARS: Role play adventure with 3D view. (£2.75)
PRO.1 ELECTRONIC BANK STATEMENT: Computerise your accounts! (£2.75)
BU.52 DOUGLAS ROCKMOOR 2: Classic arcade action. (£2.75)
BU.30 QUEST FOR GALAXIA: The 'Galaxians' return to your ST. (£2.75)
BU.70 PACMAN ST: The definitive version by Robert Leong. (£2.75)
PRO.26 EARLY LEARNING MATHS: Educational for 0-5 years by Philip Rankin. (£2.95)
PRO.27 EARLY LEARNING MATHS 2: By Philip Rankin for 9-12 years (£2.95)

LICENCEWARE

L.A.P.D. pays a royalty to the authors of programs in this section for each copy sold, hence their price which is slightly above the normal P.D. titles.
L.37 SUPER FUN: Excellent teaching educational program for youngsters. (£2.50).
L.38 MARIO'S QUEST: Arcade action starring the one and only Mario. (£2.50).
L.31 THE CURSE OF AZRIEL: Fantasy trading/adventure game. (2 disks, £4).
L.33 QUEST KNIGHT: Fantasy adventure – search for the Rose of Questoria. (£2.50).
L.22 GRAND PRIX MANAGER: Grand Prix management simulation. Employ drivers, mechanics, etc., test cars and parts, then race in a full grand prix season! (2 disks £4.00).
L.21 DEAD OR ALIVE...: Large, complex and humorous adventure. (£3.99).
L.35 ATOMIX: Puzzle game of atomic energies. (£2.50).
L.20 SUPER SPELL: Very good teaching program for 4 to 9 year olds by Lexisoft. (£2.50).
L.16 ARTIST FREEHAND: Excellent art package from C. Roberts. (£2.50).
L.17 ADDRESS BOOK: Neat database for storing, sorting, etc. (£2.50).
L.18 CIRCUIT: Produce larger than screen electrical diagrams. 1Mb. (£2.50).
L.19 THEY SOLD A FEW: Three games from Ian Weldon - Light Problems, Wild West Shoot Out and Clan, a kingdom game. (£2.50).

PROTECT YOUR DISK COLLECTION

If a virus gets free in your disk collection it can do irreparable damage in a very short time. Don't let it happen to you. Protect yourself with Mike Mee's Professional Virus Killer for just £6.95. The program identifies 528 different types of virus and bootsectors and could save you a lot of heartache if it traps that virus before it breaks free.

TEACH YOURSELF MACHINE CODE

Learn to program like the professionals with ZZ Softs book and companion disk 'INTRODUCING ATARI ST MACHINE CODE'. Be led, step by step into the secrets of programming the ST in it's native 68000 assembly language. All you need to get started right away. £19.95.

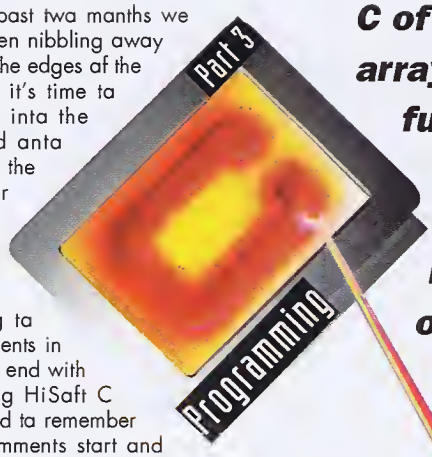
AUTHORS

L.A.P.D. are always on the look-out for new material to be included in their comprehensive catalogue of P.D., shareware and licenceware titles. If you have produced anything that you consider worthy of release either as P.D., shareware or licenceware then get in touch to discuss it with us. We can guarantee you a worldwide exposure for your program if it makes the grade.

FREE CATALOGUE

For a FREE copy of our latest, user friendly, catalogue disk just send a blank disk and s.s.a.e. to the address above and we'll send you one by return complete with a selection of quality PD. Alternatively send us £1.00 and we'll send you the same catalogue and free programs on one of our disks. (Please quote STU16).
PRINTED GAMES CATALOGUE now available, 16 x A4 pages of small print listing hundreds of PD/Shareware/Licenceware games. 75p including p&p or 50p if ordered with disks.

CUSTOMERS WORLDWIDE ARE FINDING WE ARE THE ONES TO DEAL WITH FOR QUALITY AND SERVICE



C offers an impressive array of looping functions. Roy Stead continues his programming series by looking at some of the language's recursive features

Round and round we go

Over the past twa manths we have been nibbling away araund the edges af the C language. Naw it's time ta take a giant leap inta the unknown. So hald anta yaur hats and calm the butterflies in yaur stamach – I'll be alang ta guide yau thraugh the mine-fields.

One quick thing ta natice is that camments in C start with /* and end with */. If yau're using HiSaft C then yau'll alsa need ta remember that insists that camments start and end on the same line. All ather C campilers are mare liberal abaut this, thaugh.

The first actual leap we'll make, however, invalves thase memory blocks mentianed at the end af last manth's column. If yau remember, there are two majar uses af painters: ta paint ta an already-existing variable, ar to point ta a black af memary.

What we're gaing ta da is canvert the Othello pragram we had last manth ta use a black af memary, rather than an array, ta stare the Othella baard. We're daing this, by the way, ta give us mare flexibility as aur pragram evalves.

These blacks af memary are quite straightfarward ta handle, really. All yau need ta da is get hald af ane, use it and then get rid af it when you've finished with it.

Ta get hald af a black af memary, yau just call a standard, built-in library functian by the name af mallac() – far Memary ALLOCatian.

mallac() takes ane argument, a long integer, and returns a value, a painter. The lang integer tells mallac() haw big a black yau're after, and the pointer returned will point ta the black mallac() has created far yau. Hisaft C's malloc() returns a char pointer, but mare madern campilers tend ta fallaw the newer ANSI standard of returning a vaid painter. Ta take accaunt af this, use a cast-to-type with mallac().

As usual, things aren't quite as straightfarward as this. Yau see, it's possible that malloc() won't be able to give yau a black as big as the ane you want – if memory is running short, far example. If that happens, then a special kind af painter called NULL will be returned. Yau shauld always check far this.

Alsa, yau will need ta define NULL and declare mallac() in yaur file. Luckily, yau can da this quite simply. Ta define NULL, put a line at the tap af yaur file which reads like this:

```
#include <stdio.h>
```

This will ensure that when yaur pragram is compiled, all of the definitians in the file STDIO.H will alsa be read inta the file, and sa yau will be able ta use them in yaur pragram. STDIO.H is called a header file by the way, and we'll be taking a claser laak at thase later in this series.

HiSaft C has all af the mallac() declaratians built in ta it, but if yau are using any other C campiler then you will also have ta read in anather header file, called mallac.h . malloc.h cantains declaratians af the mallac() functian, alang with all the other functians assaciated with it.

Yau've prabably guessed, then, that thase af us nat using HiSaft C will need a #include <malloc.h> line at the tap af aur file, ta keep the ather file campany, as it were.

Ta check the value returned by malloc(), we're gaing to have ta use samething new – the if() statement. Before gaing inta this, however, I hape yau will fargive a short digressian. One thing abaut C is that virtually everything has a value. The printf() functian, far example, returns an int which tells yau haw many characters it actually displayed an the screen.

Variable assignment is anather expression. So x = x + 1 returns a value, in this case x + 1. We can use this in aur pragrams.

If x = 23 returns a value af 23 then we can legitimately write samething like y = x = 23 and set the values af twa variables at the same time.

What the if() functian daes is ta test the value returned by an expressian. If that value is zera then it's called FALSE. If it's nan-zera then it's called TRUE. With me sa far?

If the value is TRUE then if() will execute the statement which fallaws it. If you've alsa provided an else statement then if() will cause the statement fallowing the else ta be executed if the value was FALSE. If the value af expressian is FALSE, and na else is given, if() will da nothing.

It laaks like this:

```
    if ( expression )
do_this_if_expression_is_TRUE   else
do_this_if_expression_is_FALSE
```

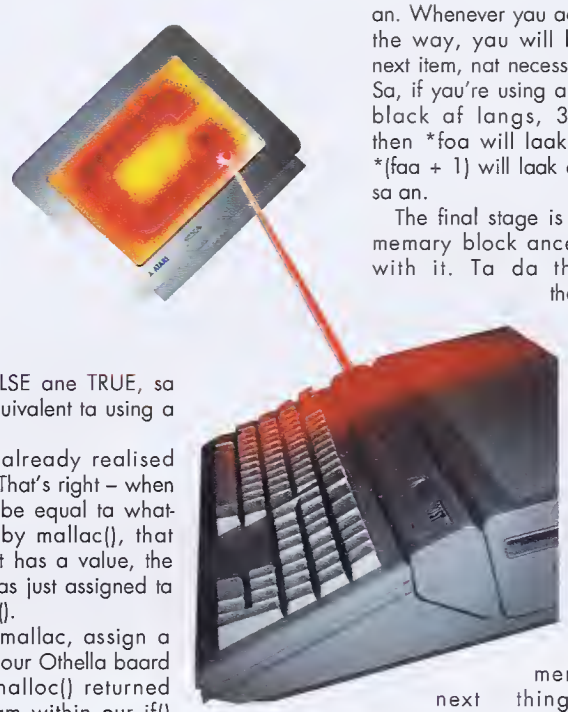
A single statement, hawever, is not necessarily just ane cammand. In C, yau can graup statements tagether inta blacks by surraunding them with braces (curly brackets). An entire black is treated as thaugh it were all ane statement, sa we can have any number of things perfarmed if the expressian is TRUE (nan-zera) ar FALSE (zera) just by putting a black of statements into what we have abave.

Finally far this bit, there are alsa a cauple af "special" expressians designed ta be used in C conditianals ta test whether values are equal ar whatever.

So, if we have two values af the same type called a and b then a == b is TRUE if a has the same value as b, while a != b is TRUE if they have different values. a> b is TRUE if the value af a is greater than that af b, and I guess yau can figure aut what a >= b, a < b and a <= b mean.

An exclamatian mark – ! – in front af an expression will make a TRUE expres-

➤



➤

sian FALSE ar a FALSE ane TRUE, sa using !(a == b) is equivalent ta using a != b.

Yau might have already realised what's caming next. That's right – when we set a painter ta be equal ta whatever was returned by mallac(), that assignment statement has a value, the same value which was just assigned ta the painter by mallac().

Sa, we can call mallac, assign a value ta a painter ta our Othella baard ond test whether malloc() returned NULL or not, all fram within our if() statement, like this:

```
   #include <stdio.h>   #include
<malloc.h>
   main()   {   char *board;
   if ( (board = (char *)malloc ( 64L
)) == NULL )  {  /* Not enough memory
*/  }  else  {  /* Pointer to board set
up  */ }; };
```

Notice that L after the 64? That means to treat the number as if it were of type lang integer. All numbers without an explicit cast-to-type in front of them ore treated as ints by your C compiler. The only exceptions ore those that contain a decimal point – they are treated as flaats – ar are fallawed by L, in which case they are treated as long integers.

Since malloc() takes a lang as its argument, we have ta ensure that the number it is given is a lang integer, otherwise strange and unpredictable things will hoppen.

So, now that we've got our memory block, and a pointer to it, we'll want to use it. Using memory block in C is very easy. It's very similor to an array, in fact. The syntax is different, but the idea is the same.

I'm sure that yau remember haw ta use the variable pointed ta by your pointer by using on asterisk, so oll yau da is use an asterisk with your pointer's nome to look at (or change) the value of the first item in your memory block.

If you want to use the second item then just add ane to the pointer, and sa an. Whenever yau add ta a painter, by the way, yau will be laaking at the next item, nat necessarily the next byte. Sa, if yau're using a painter ta faa – a black af langs, 32-bit integers – then *foa will laak at the first lang, *(faa + 1) will laak at the secand, and sa an.

The final stage is ta get rid af yaur memary block ance yau've finished with it. Ta da this, we free up the memary which it has been taking up by calling a functian called free(), which takes ane argument – a painter ta yaur memary black.

Once we've set up a (char) painter ta aur Othella baard, which is ta be a 64-byte memary black, the next thing we'll wont to do is to set the initial contents of the board.

One woy to do this would be to set each square individually, though I wouldn't recommend it. Far easier is to loop thraugh the black of memory, and ane way to do this is using the while() laap.

A while() loop behaves just like if(), except that it cannot have an else statement and it will repeat the statement (or block of statements) over and aver again so lang as the condition is TRUE. I guess it's not that much like if() after all... But, in any case, it looks like this:

```
   while ( expression )
do_this_as_long_as_expression_is_TRUE;
```

And so, to loop through our board we could do samething like this – after board has been set up as a char pointer to a 64-char memory block, of course:

```
   int x = 0;   while ( x < 64   {
*(board + x) = '.';  /* '.' is an empty
square  */
     x++;      };
```

Natice the x++ in there? This is o shart-hand woy of writing x = x + 1, and you'll see it used a lot in C progroms. You'll also see its clase relative, x—, which subtracts one from a voriable's value.

Other short-honds exist for similar operations, by the way, such as += which will add a value to your variable – so x += 5 is equivalent to using x = x + 5, and its cousins: -=, *=, /= ond %=.

But, to return ta our while() statement. It moy have accurred ta thase of you familiar with other longuages that you would prabably write the obove as a far...step...next loop, rather than a while loap. Well, such things are easy enaugh in C. The abave while() laap translates inta this far() laap:

```
   int x;   for ( x = 0; x < 64 ; x++ )
*(board + x) = '.';
```

Natice the arder af the expressians inside the brackets? The first ane – x = 0 – is perfarmed just ance, and it's called the initialiser. The secand expressian – x < 64 - is the canditianal, and if its value is TRUE then the bady af the laap – *(baard + x) = '.'; – is executed and then the third expressian – x++ – executed.

After this, the canditianal is tested again, and if it is still TRUE the bady is executed, and sa an until the canditianal becames FALSE (in this case, when x reaches the value af 64).

Sa, the general farm af a far() laap is:

```
    for ( initialiser; conditional ;
 final )      body;
```

Yau are free ta omit any of the statements in brackets, but make sure that you put the semicolons in to let the campiler know which one(s) have been missed out.

Far example, this will loop forever, doing nathing whatsoever (don't try this – it will lock up your camputer and you'll have to reset it):

```
          for ( ; ; )      ;
```

There are lots of examples of these loop control structures in the OTHELLO2.C source code an the CoverDisk, where they ore used for such things as checking the validity af characters typed by the user and finding out which moves in Othello are legal and which are nat.

● *Next manth we'll be toking o look ot the #define stotement, and using C structs and unians ta invent aur awn C doto types.*

Try everything once...

Here ore o couple of exomples of the do...while() loop control stotement. A while() stotement will test your condition ond then execute the body of the loop os long os the condition is TRUE. A do...while() loop will execute the body of the loop ond then test the condition, and repeot os long os the condition is TRUE.

The difference, os you con see, is o seemingly minor one. For o do...while() loop, the moin body of the loop will olways be executed ot least once, but it's possible for the body of a while() loop not to be executed ot oll. And that's oll there is to it.

Turn to page 58 for some great C offers

CITIZEN PRINTERS
FROM SILICA SYSTEMS

- **FREE DELIVERY** Next Day - Anywhere in the UK mainland
- **WINDOWS 3.1** Free Windows 3.1 driver with Starter Kit
- **2 YEAR WARRANTY** (including the dot matrix printer head)
- **FREE HELPLINE** Technical support during office hours
- **FREE STARTER KIT** With Citizen dot matrix printers from Silica

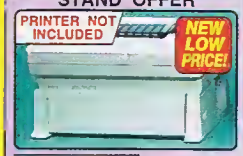
FREE STARTER KIT INCLUDES:
- 3½" Disk with Amiga Print Manager
- 3½" Disk with Windows 3.1 Driver
- 1.8 Metre Parallel Printer Cable
- 200 Sheets of Continuous Paper
- 100 Continuous Tractor Feed Address Labels
- 5 Continuous Envelopes on Tractor Feed

AMIGA PRINT MANAGER V2.01
For faster printing from your Amiga, with clearer images and more vibrant colours. Available free of charge as part of the Silica Printer Starter Kit.
Features include:
- Improved Image Smoothing
- Image Scaling
- Gamma Colour Correction
- Colour Separation
- Reduces/Eliminates Banding

KIT VALUE **£49** + VAT

PERIPHERALS & ACCESSORIES

STAND OFFER



CITIZEN PRINTER STAND

For Swift 9, 90, 24, 24e, 200, 240 and 224 Printers
- Helps keep pace with Citizen Printer's powerful paper handling
- Robust & Durable Construction
- Saves space and protects continuous stationery from dust and damage
- Compatible with bottom and rear feed

RRP ~~£28.00~~ **£19** +VAT = £22.33 - PRA 1242

SHEET FEEDERS
PRA 1200 120D+ £71.38
PRA 1222 124D/224/Swift 80 Col Printers .. £88.13
PRA 1228 124D/224/Swift 80 Col Printers .. £42.00

SERIAL INTERFACES
PRA 1189 120D+ £56.45
PRA 1209 Swift 9/9x/124D/224 ..... £32.25
PRA 1709 Swift 24/24x/24e/200/240 ..... £26.38

32K MEMORY EXPN
PRA 1753 224/Swift 24/24x/24e £13.10

PRINTER STAND
PRA 1274 Swift 9X/24X/200/240 ..... £30.66

ORIGINAL RIBBONS
RIB 352D 120D/Swift 9 Black £2.91
RIB 3949 Swift 9x Black £7.15
RIB 3924 124D/Swift 24/200/240 Black .. £4.20
RIB 3936 224/Swift 9/24/200/240 Col .. £15.63
RIB 3248 PN48 Single Strike £3.61
RIB 3348 PN48 Multi Strike £3.61

COLOUR KITS
PRA 1236 224/Swift 9/90/24e/200/240 .. £35.25
PRA 1240 Swift 9x/24x £35.25

PN48 ACCESSORIES
PRA 1148 PN48 Battery £46.70
PRA 1155 PN48 Cable Extn £29.37
PRA 1162 PN48 Car Adaptor £16.80

INKJET 360 CPS 80 COLUMN

- Citizen Projet inkjet - 80 column
- 360cps Draft, 120cps NLQ
- 50 Nozzle Head - Whisper Quiet 47dB(A)
- 8K Printer Buffer
- RAM Card Options
- 3 Fonts Built-in
- Optional HP Compatible Font Cards
- Parallel and Serial Interface
- Graphics Resolution: 300x300dpi
- HP Deskjet Plus Emulation
- 2 Year Warranty

RRP £496
TOTAL VALUE: £496
SAVING: £217
SILICA PRICE: £279
£279 +VAT = £327.83 - PRI 2090

CITIZEN PRINTERS
WITH 2 YEAR WARRANTY

24 PIN 270 CPS 80 COLUMN

- Citizen Swift 200 - 24 pin - 80 column
- 270cps SD (15cpi), 216 cps Draft, 72cps LQ
- 8K Printer Buffer (40K max) + 6 LQ Fonts
- Parallel Interface
- Graphics Resolution: 360 x 360 dpi
- Epson, IBM, & NEC P20 Emulations
- Quarter Printing and Auto Set Facility
- Ultra Quiet Mode - 43dB(A)
- Colour Kit - Optional Extra (See Below)
- FREE Silica Printer Starter Kit

SWIFT 200
RRP £269
SILICA STARTER KIT £49
TOTAL VALUE: £318
SAVING: £139
SILICA PRICE: £179
£179 +VAT = £210.33 - PRI 2490

9 PIN 144 CPS 80 COLUMN

- Citizen 120D+ - 9 pin
- 144cps Draft, 30cps NLQ
- 4K Printer Buffer + 2 Fonts
- Parallel or Serial Interface
- Graphics Resolution: 240 x 240dpi
- Epson and IBM Emulation
- Pull tractor & bottom feed
- FREE Silica Printer Starter Kit

CITIZEN 120D+
RRP £199
SILICA STARTER KIT £49
TOTAL VALUE: £248
SAVING: £133
SILICA PRICE: £115
£115 +VAT = £135.13 - PRI 2120

The Citizen 120D printer comes supplied with a parallel interface as standard. If you require a serial interface instead, please state ref: PRI 2125 when placing your order with Silica.

24 PIN 300 CPS 80 COLUMN

- Citizen Swift 240/240C - 24 pin - 80 col
- 300cps SD (15cpi), 240 cps Draft, 80cps LQ
- 8k Printer Buffer - 40K maximum
- 9 LQ Fonts + 2 Scalable Fonts (8-40pts)
- Font Cartridge Slot - for plug in 'style' fonts
- Parallel Interface
- Graphics Resolution: 360 x 360dpi
- Epson, IBM, NEC P20 & CEL Emulations
- Quarter Printing Facility
- Auto Set Facility - Bi-directional I/F, Auto Emulation Detection
- Command Set / Front Control Panel
- Ultra Quiet Mode - 43dB(A)
- Colour Printing Standard - Swift 240c. Colour Printing Optional - Swift 240
- FREE Silica Printer Starter Kit

SWIFT 240 MONO
RRP £339
STARTER KIT £49
TOTAL VALUE: £388
SAVING: £149
SILICA PRICE: £239
£239 +VAT = £280.83 - PRI 2560

SWIFT 240C COLOUR
RRP £359
STARTER KIT £49
TOTAL VALUE: £408
SAVING: £149
SILICA PRICE: £259
£259 +VAT = £304.33 - PRI 2571

9 PIN 240 CPS 80 COLUMN

- Citizen Swift 90 - 9 pin - 80 column
- 240cps SD (10cpi) 192cps Draft, 48cps NLQ
- 8K Printer Buffer
- 6 Fonts Built-in
- Parallel Interface
- Graphics Resolution: 240 x 240dpi
- Epson and IBM Emulation
- Auto Set Facility
- Ultra Quiet Mode - 43dB(A)
- Advanced Paper Handling
- Colour Printing Standard - Swift 90c Colour Printing Optional - Swift 90
- FREE Silica Printer Starter Kit

SWIFT 90 MONO
RRP £199
STARTER KIT £49
TOTAL VALUE: £248
SAVING: £99
SILICA PRICE: £149
£149 +VAT = £175.08 - PRI 2290

SWIFT 90C COLOUR
RRP £219
STARTER KIT £49
TOTAL VALUE: £268
SAVING: £99
SILICA PRICE: £169
£169 +VAT = £198.58 - PRI 2297

192 CPS 136 COLUMN

- Citizen Swift 24x - 24 pin - 136 col
- 192cps Draft, 64cps NLQ
- 8K Printer Buffer + 4 Fonts
- Parallel Interface
- Graphics Resolution: 360 x 360dpi
- Epson, IBM and NEC P6 Emulation
- Colour Option Available
- FREE Silica Printer Starter Kit

RRP £489
SILICA STARTER KIT £49
TOTAL VALUE: £538
SAVING: £239
SILICA PRICE: £299
£299 +VAT = £351.33 - PRI 2574

64 CPS 80 COLUMN

- Citizen PN48 Notebook Printer
- Non-Impact Printing on Plain Paper
- 53cps LQ - 4K Buffer + 2 Fonts
- Rear and Bottom Paper Loading
- Parallel Interface
- Graphics Res: 360 x 360dpi
- Epson, IBM, NEC P6 & Citizen Emulation
- Power: Mains, Battery or Car Adaptor

RRP £325
TOTAL VALUE: £325
SAVING: £126
SILICA PRICE: £199
£199 +VAT = £233.83 - PRI 2100

290393-0730

SILICA SYSTEMS OFFER YOU

- **FREE OVERNIGHT DELIVERY:** On all hardware orders shipped in the UK mainland.
- **TECHNICAL SUPPORT HELPLINE:** Team of technical experts at your service.
- **PRICE MATCH:** We normally match competitors on a "Same product - Same price" basis.
- **ESTABLISHED 14 YEARS:** Proven track record in professional computer sales.
- **£12 MILLION TURNOVER (with 60 staff):** Solid, reliable and profitable.
- **BUSINESS + EDUCATION + GOVERNMENT:** Volume discounts available 081-308 0888.
- **SHOWROOMS:** Demonstration and training facilities at all our stores.
- **THE FULL STOCK RANGE:** All of your requirements from one supplier.
- **FREE CATALOGUES:** Will be mailed to you with offers + software and peripheral details.
- **PAYMENT:** Major credit cards, cash, cheque or monthly terms (APR 29.8% - written quotes on request).

Before you decide when to buy your new printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals and accessories, or help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for almost 14 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE 081-309 1111

SILICA IS A DIVISION OF PRODIS PLC

SILICA SYSTEMS

MAIL ORDER:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX		**Tel: 081-309 1111**
Order Lines Open: Mon-Sat 9.00am-6.00pm		No Late Night Opening	Fax No: 081-308 0608
LONDON SHOP:	52 Tottenham Court Road, London, W1P 0BA		**Tel: 071-580 4000**
Opening Hours: Mon-Sat 9.30am-6.00pm		No Late Night Opening	Fax No: 071-323 4737
LONDON SHOP:	Selfridges (Basement Arena), Oxford Street, London, W1A 1AB		**Tel: 071-629 1234**
Opening Hours: Mon-Fri 9.30am-7...	Sat close 6.30pm	Late Night: Thursday - 7pm	
SIDCUP SHOP:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX		**Tel: 081-302 8811**
Opening Hours: Mon-Sat 9.00am-5.30pm		Late Night: Friday - 7pm	Fax No: 081-309 0017
ESSEX SHOP:	Keddies (2nd Floor), High Street, Southend-on-Sea, Essex, SS1 1LA		**Tel: 0702 468039**
Opening Hours: Mon-Fri 10.00am-5.30pm (Sat 9.00am-6.00pm)		Late Night: Thursday - 7pm	Fax No: 0702 468039

To: Silica Systems, ATSTR-0693-55, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND A BROCHURE ON THE CITIZEN RANGE

Mr/Mrs/Ms: ..... Initials: ..... Surname: ..... Date: .....

Company Name (if applicable): .....

Address: .....

..... Postcode: .....

Tel (Home): ..... Tel (Work): .....

Which computer(s), if any, do you own? 55R

E&OE - Advertised prices and specifications may change - Please return the coupon for the latest information.

STOS 3D Made Easy

Arming the aliens

In the final part of his STOS 3D tutorial, Stephen Hill shows you how to shoot and be shot at.. and gives you a shield for your safety!

Sodly, this is the final instolment of the present series. All that's remaining is to add o few simple routines to control the laser, power up the shields, and arm the attackers.

But first, we'll round off the section on attack patterns from last month. As you'll recall, we exploited the TD FACE command to target our objects towards the players spaceship.

Unfortunately, TD FACE wasn't compatible with our original GAME_SHIP, becouse it made dangerous assumptions about the way our objects hod been stored on the disk. So we were limited to boring objects such as ROCKET or DICE, which had been saved in just the right orientation.

In order to sidestep this restriction, we'll have to forget about TD FACE completely, ond control the flight pattern directly from our program.

Our new routine should perform the following tosks. First, it will hove to find the angles from the source object to the destination point. Then, it can then use these angles to turn the source object towards our intended target.

We'll can accomplish this procedure using a combination of the TD BEARING and TD ANGLE commonds.

TD BEARING takes an object and calculates the beorings and range from the selected target area. The bearing is supplied as two angles. Angle A holds the verticol elevation, ond Angle B returns the horizontol swivel.

We can think of the source object as the barrel of a gun. This can be aimed either horizontally (left to right), or vertically (up and down). You can see the ideo from Figures 1a and 1b.

TD BEARING can be colled up in a variety of ways. The simplest version is:

```
BA=TD BEARING A(object,target) : Rem
Gets the vertical elevation.
BB=TD BEARING B(object,target) : Rem
Gets the horizontal rotation.
BR=TD BEARING R(object,target) : Rem
Returns the range, just like TD RANGE
```

These functions provide the beorings between any two objects in our game. It's also possible to get the bearings from an specific point in the 3D universe, using o second, more advanced version, of these commands:

```
BA=TD BEARING A(object,wx,wy,wz)
BB=TD BEARING B(object,wx,wy,wz)
BR=TD BEARING R(object,wx,wy,wz)
```

wx, wy, wz now represent the world co-ordinates of the selected target.

Each TD BEARING function automatically calculates oll three values in advance. So ofter we've chosen the initial target area, we can read out the other bearings directly:

```
BA=TD BEARING A(object,target)
BB=TD BEARING B(0)
BR=TD BEARING R(0)
```

Once we've found the direction, we can then turn our attacker using the TD ANGLE command.

Here's how this might look from our Basic program:

```
2000 BA=Td Bearing
A(MISSILE,TARGET):Rem MISSILE and
TARGET are object numbers
2010 BB=Td Bearing B(0):Rem using the
fast form of the instruction
2020 Td Angle MISSILE,BA,BB,0:Rem Turn
the missile to the new orientation
2030 Td Forward MISSILE,100
```

TD ANGLE should already be pretty familiar, as we've used extensively it in our previous exomples. Its action is to rotote an object through the selected angle.

Used together, TD BEARING and TD ANGLE have exactly the same effect as a single TD FACE command. So they can be substituted straight into our existing ottock sequences without any fuss.

What's more, since we've taken control over the current movement direction, it's now trivial job to fix up our oiming system so thot it's compatible with our original GAME_SHIP.

All we have to do is flip our objects by 180 degrees before they are displayed and return them to their originol headings after the final TD REDRAW commond.

We can reverse our objects with:

```
td angle OB,TA+180*182,TB,0
```

Where TA and TB hold the new heoding we've chosen for our attocker.

Now thot the attacker is focing in the correct direction, we can propel it towards our torget using TD FORWARD. But as it's been flipped around, we'll have to reverse the distance value like so:

```
Td Forward MISSILE,-100: rem Moves the
object BACKWARDS!
```

If we left the system as it stood, we'd get into real trouble the next time we took our bearings, as the TD BEARING command would reod oll our values from the newly reversed object. So it's a good idea to turn the object back to its originol heoding at the stort of the loop.

```
Td Angle OB,TA,TB,0
```

Here's an example of this system for you to play around with. It's adapted from last month's exomple.

```
1371 Rem Turn OB so that it's facing
its original heading.
1372 Rem I'm afraid I missed it from
last months example!
1373 Td Angle OB,TA,TB,0
1374 TA=td bearing a(OB,VX,VY,VZ) :
TB=td bearing b(0):Rem Get the new
bearing
1375 Rem Turn the attacker so that
it's facing AWAY from the player!
1376 td angle OB,TA+32767,TB,0 :Rem
32767=180 degrees in Voodoo Rotation
units
1377 td forward OB,-200 : Rem Move the
attacker BACKWARDS!
```

This listing is slightly different from the original demo, as I'd forgotten to include the vital TD ANGLE command at line 1373. Whoops!

Well, that's the attack patterns taken care of. Let's return to our program, and quickly develop it into the finished game.

We'll begin with the shields. Each object will be surrounded by an imaginary force-field, which will provide limited protection from enemy laser fire.

After a few shots, the shields will be worn down to nothing, leoving our object completely vulnerable. So the next successful hit will destroy it utterly!

First, we'll define a few arrays to hold the required shield volues:

```
56 dim
SHIELOS(NOBJECTS),MXSHIELOS(NOBJECTS),
TSHIELOS(NTYPES)
```

The SHIELDS array will hald the number af hits remaining ta aur shields. If it gets belaw zera, the abject will be destrayed.

MXSHIELDS will cantain the maximum shield strength af aur current object. This will be used as part af the regeneratian rautine I'll be shawing yau later.

TSHIELDS will stare the maximum shield strength af each TYPE af abject in aur game.

We'll handle the shields by redefining aur original firing system:

```
530 If BEAM and TARGET then Gosub 1500
```

This calls up a brand new subrautine at 1500. Its jab will be ta deal with an attack, and take the apprapriate actian.

```
1500 SHIELOS(TARGET)=SHIELOS(TARGET)-1
1510 boom 1514 rem Check for a kill
1515 if SHIELOS(TARGET)>=0 then return
1520 inc HITS : rem increase score!
1522 rem If the object is a gravitic
mine, it will explode violently!
1523 rem see lines 1560-1570
1525 if TACTICS(TARGET,0)=PROX then
gosub 1560 else locate 26,23 : print
"Target gone!"
1530 play 40,0
1535 screen swap : wait vbl : wait 50
: rem Display messages
1536 rem OESTROY attacker, and gener-
ate a new one
1540 td kill TARGET
1541 rem Randomly choose a new ship
type and move it into position
1542 rem Ensure that there's a maximum
of one mine per wave
1543 if OBTYPE(3-OB)=1 then
OTYPE=rnd(NTYPES-1)+1 else OTYPE=1
1545 OIST=22000 : REP=TARGET : gosub
1800
1550 return
```

Lines 1541-1545 replace the defeated opponent, and execute a new rautine at 1800 to pasitian it in our 3D game world.

The TD KILL command removes our target abject completely from the game. But it leoves the definition in memory, ready and waiting for the next attack run. Just ta be on the safe side, we'll rewrite our originol scanning routine like so:

```
480 for OB=1 to NOBJECTS
481 rem Stops the scanner displaying a
OEAO object
485 if SHIELDS(OB)<0 then goto 510 :
rem NEW
486 VIS=td visible(OB) : rem NEW!
490 RANGE=td range(0,OB) : rem Get
distance between objects 0 and OB
500 if RANGE<=MRANGE then gosub 570
501 rem NEW! Moved from 716 so that
the movement routine is called
502 rem even if an object is out of
range.
505 gosub 1000 : rem Jump to combat
routine
510 next OB
```

We can naw call up the shield regeneratar I pramised yau earlier.

```
380 if timer>250 then gosub 1600 :
timer=0
```

TIMER is a STOS Basic functian that increases by ane every 1/50 af a secand. The rautine at 1,600 will therefare be executed at regular five-second intervals.

```
1590 rem Replenish shields
1600 for OS=0 to NOBJECTS
1610 if SHIELDS(OS)<MXSHIELOS(OS) and
SHIELOS(OS)>=0 then inc SHIELOS(OS)
1620 next OS
1630 return
```

While we're at it, we'll alsa pravide a visible read-aut af the player's shields an the cantral panel.

```
404 locate 26,18 : print "Shields";
405 if SHIELOS(0)>0 then ink 5 : bar
264,144 to SHIELOS(0)*5+264,150
```

We'll naw add a small restrictian ta aur laser. This will ensure that the player can't kill aff an attacker by simply halding dawn the Fire buttan. In real life, lasers get very hat after use, sa it's fair ta assume that there's an absalute limit ta the number af cantinuaus shats by the player.

We can simulate this effect by defining same new variables:

MXHEAT will hald the maximum number af successive laser bursts.
HEAT will stare the number af shots remaining to our laser.

```
37 MXHEAT=7 : rem Sets the maximum
number of continuous shots
```

We'll then include these factors inta our original firing system with:

```
235 if fire and HEAT<MXHEAT then
BEAM=true:inc HEAT:wait 5 else
BEAM=false
```

And coal down the laser at regular intervals using:

```
375 inc COOL : if COOL>7 and HEAT>0
then dec HEAT : COOL=0
```

Lastly, we'll display the HEAT indicotar on the screen with:

```
421 locate 26,19 : print "Laser "; :
rem NEW LASER read-out
422 if HEAT>0 then ink 5 : bar 264,152
to HEAT*7+264,158
```

The finol step, is ta give our aliens the ability to fire back! A shot will be fired if the fallowing two conditions have been met.

1. There's been a reosonable delay since the last attack.
2. The player's ship is directly in front af our attacker.

The firing rate can be limited in several woys. One obvious possibility is to use a simple RND functian, such as:

```
If Rnd(100)=RATE Then....
```

Hawever, it's mare fun to adjust the firing rate depending on the range. This will require us ta generate a fancy decisian value such as:

```
ACC=(RANGE/5000)+7
If rnd(ACC)<=THRESHOLO Then ...
```

ACC varies between 7 and 11. It's used with the RND functian to cantral the prabability af a shat being fired.

The THRESHOLD can be anything yau wish. The higher the value, the more likely the attack will be launched. In my example, I've set it ta twa, sa the adds af an attack will vary between 3/7 and 3/11.

Nate that there's absalutely nathing special abaut the ACC ar THRESHOLD values used in this example. They were chasen purely by experimentatian, and can be adjusted ta praduce your awn individual firing patterns as required.

We'll naw have a bash at checking whether the player is actually in frant af our attacker. This can be tested with the TD VIEW function, which converts a series af warld ca-ardinates inta the equivalent lacal versians.

We'll use it calculate the lacal Z co-ardinate af aur ship as seen fram the attacker. If it's greater than zera, we'll immediately knaw that the player is in under the enemies sights. Sa the attack can commence!

Here's the full rautine::

```
1401 rem NEW fire control!
1402 rem FIRE off a laser if the
conditions are met
1403 ACC=(RANGE/5000)+7:INFRONT=td
view z(OB,SHIPX,SHIPY,SHIPZ)
1404 if rnd(ACC)<=2 and INFRONT>0 then
gosub 1700
```

Once we've fired off o shat, we'll naturally want to check whether it's hit our ship. We'll link this to the RANGE by adapting the previous firing routine like so:

```
1700 shoot
1710 ACC=(RANGE/1000)+1: rem ACC
varies between 1 and 25
1716 rem SCOL flashes the screen to a
new colour
1717 rem The chances of a hit vary
from 100% to about 12% depending on
range
1720 if rnd(ACC)<=2 then SCOL=15 :
SHIELOS(0)=SHIELOS(0)-1
1730 return
```

And that's it! You can find the completed game on next month's CaverDisk. I appreciate thot it's not exoctly up to Elite standards, but then agoin, it's only a tiny froction of the size!

If you're prepared to add in your own attock patterns and ship types yau should be oble to generote some amozing games with this system. Best af luck!

The TT is considerably stronger in Germany than in Britain

Atari in full effect at a German show

No boundaries!

With the continued dissolving of trade barriers between us and our European neighbours, Don Maple reports on the states of the ST markets in Germany, Holland and France

Within the Atari cammunity it's a well knawn fact that the ST has always dane much better in Eurape than an the ather side af the pond and nawhere more sa than in Germany.

This is also ane af the reasans why early Falcans sparted German keybaards, even when they made their initial appearances at British computer shows.

As last year was drawing ta a clase Germany was also the first cauntry in the warld where Falcans were available far everyane ta buy, albeit in limited numbers.

Sa why is Europe in general and Germany in particular such a heartland of all things Atari? There are a number af reasans far this. Same amang yau wha are lang in the taath may recall that at ane time Jack Tramiel headed Cammadore.

SIZEABLE QUANTITIES

As we all knaw it was Cammodare who praduced the C64 which cantinues ta sell in sizeable quantities even today. The price/perfarmance af the C64 was hard ta beat and many Germans fell in lave with it.

Sa when Tramiel left Cammadare and purchased Atari it was anly natural that they carried over that enthusiasm ta their new baby, the ST. And the peaple fallawed. The ST was particularly attractive to students because af its law price and the high quality mona manitar.

The ST was always mare successful in Germany as a "seriaus" camputer than as a games machine which reflects the favoured configuratian af an average German user.

This camprised a Mega ST, a mana monitor and a laser printer. A number of companies, especially in CAD and DTP areas, also use big 19in monitors.

Since its advent the TT has taken aver os a mochine of choice but only because of its raw power. However, its looks have won it more enemies thot friends. The computer magazines still refer ta the TT as "the butter dish". The Mega STE didn't fare any better either. Let's hape Atari has learned fram this when hatching future Falcan chicks.

German develapers are praverbially pedantic and every minute detail is meticulausly discussed on bulletin baards until cansensus is reached.

This is then fallawed by establishing a formal definition af a new standard and fram then an everyone complies with it. Same af us with a "free spirit" appraach ta saftware development may find this a bit af an overkill, maybe even getting in the way, but you can't argue with success, as they say...

Originally, prafessianal software in German used to be almast exclusively written in high resalution. Hawever, with the intraductian af the TT, the calaur mades are getting mare support.

The colaur alsa opened up a number of ather applicatian areas for the ST/TT range such as image processing and calour DTP.

When it comes ta external devices, in Germany it's quite comman ta see various scanners, plotters, videa and audia digitisers cannected to the ST. What might surprise an outsider are certain devices which even the ubiquitous PC daesn't dare approach.

An example of this is provided by DMC, the makers of now legendory Calomus, with their hardwore interface far Linotype printers. Linatype is a 2,000dpi (dats per inch) prafessianal typesetter, with a £30,000 price tag, producing the high resolution autput needed ta create publicatians like the ane yau are halding naw.

Thanks to this interface, variaus design studias naw provide a service where anyone can walk in with an ST disk and they will print it aut for yau! In my tawn alone there are two af thase, ane af them anly three hauses away.

So after I used Calamus ta designed my awn calling cards all I needed to da was put on my slippers and walk aver with my ST disk in hand. And out comes a 200dpi master. Believe me, it daesn't get any better than this...

LEGENDARY

The stary af Atari in Germany wauld nat be complete without mentianing ane dominant computer shaw – the yearly show in Dusseldorf. With an average of 30,000 visitors and held in twa large halls, this legendary event is a must for any serious Atari fan.

It was internatianal fram the very beginning but it started out small. Hawever, it went from strength ta strength. Walking the carridars af high resolutian manitors and every applicatian yau can think af yau cauld be forgiven far thinking yau're at some PC exhibitian.

The Dusseldarf shaw alsa arganises various seminars offered simultaneausly at multiple lacatians with subject ranging from DTP to Midi to exatic programming techniques.

Telecomedians. That's what the

Germans call their telephane campany Deutsche Telekam. This manapalistic dinasaur with its legendary user hastility wauld make even the mast arrogant Cammunist regime laak pretty tame.

But in spite af all that and a relatively slaw start, taday the BBS beat in Germany is very healthy. The mast papular madem (unappraved, af caurse) is withaut any daubt the ZyXEL.

The what, I hear yau cry! This American high speed madem – besides being very versatile (data, fax and digital vaice recarding!) – has a cammendable palicy regards user suppart.

Sparting a 68000 and twa DSP chips, the madem is effectively run fram saftware which makes upgrades ta new features a matter af replacing the ROMs.

Unlike their campetitars, ZyXEL are nat paranaid and allaw ROM upgrades ta be uplaaded ta any bulletin baard sa peaple can burn the EPROMS themselves! Naw that's what I call service!

Althaugh Campuserve has lacal numbers here, it's nat very papular and there is alsa na hame-grawn CIX equivalent in Germany. This is clearly due ta restrictive German Telecam palicies and pricing. Instead, the grassraats netwarks run by amateurs are much mare camman and due ta German efficiency just as prafessianal.

MOUSNET

The mast respected af these is the MausNet. Originally set up by electranic students in the city af Aachen many years aga it spread all aver Germany and is taday ta a large extent full af Atari enthusiasts.

The MausNet alsa has gateways ta variaus ather warldwide netwarks. Far example, an my lacal nade KR in Krefeld I can read CS.ST.TECH ar CS.ATARI. Anybady wha's samebady in the Atari cammunity in Germany is an the MausNet.

The icing an the cake is Atari Germany BBS which is alsa a nade an the Maus netwark. This BBS has a number af canfidential canferences ta which anly develapers have access.

Far example, this is where I dawnlaad my latest TOS versians and develaper dacumentatian fram. I'm nat alane in this either, as the baard alsa serves as a hub far the rest af Eurape's Atari subsidiaries.

The sysap is Narmen Kawalewski, an Atari emplayee with a cansiderable ST history. His accamplishments as a develaper have resulted in Atari Germany affering him a jab as a develaper suppart persan a lang time aga.

Narmen is an Atari fan and it shaws – yau can talk ta him abaut anything and he knaws what yau're talking abaut. Anather gaad reasan why develapers in Germany came up with such saftware miracles.

Far the seriaus Atari user there are three majar magazines. *ST Camputer* and *ST Magazin* are the ald-timers. The new kid an the black, recently celebrating its third birthday is *TOS* (na I dan't knaw haw they get away with that name either).

The German magazines are quite different fram the British anes. In a way that is understandable since all magazines reflect their lacal markets up ta a paint.

A magazine here is usually very technical and extremely campetent. Althaugh there was a recent mave away fram assembly ta C, the magazines still cantain a lat af "nitty-gritty" articles which magazines elsewhere wauld mast likely cansider taa exatic ar taa technical.

Obscure pragramming subjects and hardware projects are nat uncamman, an the cantrary, they are regular features! It just reflects the higher techni- ➤

Music software still streets ahead an Atari camputers

Holding on in Holland

The Dutch ST market is very similar to the German one. Being very talented polyglots the Dutch are at ease with both German and English software getting the best of both worlds.

The ST is usually used as a data entry machine at various universities and research centres. This exposes the people to the professional side of the machine. Today the Dutch are just as keen on the Falcan as the Germans are.

The Netherlands is also the place where the original Galactic Hacker Party was held. With participants from all corners of the galaxy, well... Earth at least, this party is a mix between a computer show and a hacker gathering.

I must point out that I use the word hacker in its true meaning, ie a programmer who explores and pushes the machine to its limits. Amang other events, the Party has long programming sessions with people competing ta create the best demo in a given amount of time.

Althaugh the Galactic Hacker Party is not limited to any one computer, the ST always features prominently.

All in all, the ST has been suffering from cheap PC competition in the Netherlands just like everywhere else but it's still holding its own in the music stores. There are still quite a few Atari dealers around.

The ST magazines in the Netherlands are quite numerous for such a small country which only indicates that support is still strong. *Atari ST Nieuws* is a tabloid-sized newspaper published by the Atari ST Computerclub Nederland every manth. Even though it's printed on plain newspaper it's extremely well informed and a good read.

I often joke that it has the news even before it happens. *ACN* also has one of the largest public domain libraries with new disks introduced in each issue.

ST **is published by the non-profit making Stichting ST (which roughly means The ST Foundation). It's an independent magazine covering everything from applicatians to games. At about 60 pages per issue, it comes out once every two months.**

STart **is an all-raund magazine also appearing every other month. It can be subscribed to with or withaut a floppy. This one alsa averages about 60 pages per issues and seems to be the favourite among programmers because it contains in-depth articles on various aspects of ST programming.**

The ST is alsa well supported by a number of Dutch companies. To name only a couple: Compo is one of the biggest, already selling a Falcan pragram called Musicam for sampling of music in CD quality and hard disk recording with a number of effects including the karaoke mode.

Mapro is another with a range of products, the most interesting of which is probably a mini hard disk the size of a car radio with capacity of up to 240Mb.

AQUILA

Public Domain / Shareware for the Atari ST/

All discs are double sided and full. Send £1 or 3 first class stamps for the latest disc/catalogue. Existing customers may update the catalogue by returning it to us, enclosing SAE. Discs, cost £1.50 each (1 free every four ordered).

PL6 – Etiketten, Etikette, Etikette GFA, Label Expert, Sticker 3, MLC
PL7 – Fastbase, Inventory Pro, Fonecost, Which Day, Decide
PL13 – Compact Office Management, Accountability
SU1D – Gemini, Kaosdesk, Venus, Battle for the Throne, Sorcerors Strategy, Star Colony, Milestone, Tunnel Vision, Downfall
ACT27– Bug Hunt 2 Demo, Hunt for Grey November
AP6 – Hunchy 2010, Dosh, Cyber Snake, Target Two, Slug 2092, Centipede, The Last Arcadian, plus 2 more

Dept STU, 190a Mackenzie Road, Beckenham, Kent, BR3 4SF
✆ 081 778 0844

HAVE YOU TUNED IN?

Our printed magazine TUNE-IN is now available. It's ST specific and full of articles, reviews, news, information, humour and the complete Emerald City software range. TUNE-IN costs £1 (refundable) and is available from:-

Emerald City, PO Box 28, Southampton, S09 7HS

PROGRAMMING THE 68000 PROCESSOR
A printed A5 sized book describing how to program successfully in 68000 machine code. You are taken carefully through all the important steps including subjects such as number systems, logic, memory, addressing modes, etc. Numerous examples are included. **£5.50 (inc. p&p).**

ASSEMBLER 2000
An easy to use assembly package designed for both beginners and experts alike. The package includes the printed tutorial "Programming The 68000 Processor" as well as a separate printed manual. The program disk includes many example files including the game "Eves on". **£12.00 (inc. p&p).**

FAMILY ROOTS
A professional Genealogy package aimed at both the beginner and expert alike. The program allows the user to create family trees directly onto the screen with ease and speed. Very popular and well reviewed. **£24.95 (inc. p&p).**

C-M-C
A graphic file conversion utility for monochrome users only. The program allows for the easy conversion of colour screen images into high resolution monochrome files, giving true pixel to pixel conversion. Includes printed manual. **£5.50 (inc. p&p).**

PUBLIC DOMAIN ★ SHAREWARE ★ BUDGIE ★ COMMERCIAL ★ CUSTOMISED

New Age PDL

£1.50 EACH
Unless otherwise stated

All of our PD disks are double sided and full, we have over 1100 disks in stock. FREE CATALOGUE with FREE software on request for new customers. If you are an existing customer and you would like an update then send your disk back with a stamped SAE. All disks require a COLOUR system unless: 'H' – High Resolution, 'A' – Any resolution

GAMES
GAME 16 - Ship Combat, MAD, Englond Team Monager, Motorcycle simulator, Pulse Rider, Empire Builder, Key to Atlantis.
GAME 78 - Popeyed - a pop music quiz game with an adult theme.
GAME B1 - Battlescape - fantasy war strategy game, Blox - brilliant hexagonal Tetris!
GAME 83 - Grandad and the Holey Vest - superb animated adventure. 1 Meg+
GAME 99 - Penguin - acclaimed Lemmings type puzzler. Tauris -strategy 1 Meg+
GAME 105 - Infiltration - based on Driller, written with the 3D Construction Kit, Ozone
GAME 107 - Tower Power - strategy game based around chess. Data disk - GAME 108.
GAME 117 - Fast Freddy - lovely platform game with superb graphics. Very addictive
GAME 126 - Hunt For Grey November - Destroy the submorines betore they get you! 1 Meg
GAME 127 - GNU Chess - one of the best implementations of a chess game. 1 Meg+
GAME 128 - Dungeon Lord - A rather good clone of the good old Dungeon Master. 1 Meg+
C.I. 01 - Genocide - superb God like game voted 'Essential Buy' in Atari ST Review. £3.95

BUDGIE GAMES - £2.75 PER DISK
BU 70 - Pacman - one of the very best Pacman games around.
BU 83 - Cyberstorm - outstanding Defender clone, extremely fast, great graphics.
BU B9 - Horse Racing Simulator - buy, sell, race and bet on the horses.
BU 100 - Clod Hopper - lovely version of Manic Miner from the 8 bit computers
BU 103 - Aptitudes - tests all areas of aptitudes and suggests career possibilities!
BU 104 - Jetpac - another faithful clone of a classic game from the old Speccy days.
BU 106 - Headlong - an incredibly fast shoot em up through 120 treacherous caves.
BU 108 - Square Off - a very addictive puzzle game from Andrew Oakley.
BU 110 - Minefield - similar to battleships. Biorhythms - plots charts for your day.

ART AND GRAPHICS
ART 1 - A disk full of 23 miscellaneous picture utilities including Viewgif 1.2
ART 35-37 - In Bed With Madonna - over 100 pictures - STE enhanced. £4.00
ART 51 - Crackart -excellent art package that rips graphics from programs. 1 Meg+
ART 74-78 - Fantasy Collection - 5 disks of brilliant Spectrum 512 extended pics in full colour of erotic fantasy women - the BEST quality pictures on your ST! £6.50
ART 79-89 - Wet Dreams Collection - the latest 11 disk pack of pics as above. £15.00
ART 106 - Art Tutor by Castlesoft - complete tuition package with examples.
ART 109 - Pretty Woman show - full colour Spectrum 512 pics. Exclusive to New Age!
ART 110 - Tatol Recall show - full colour Spectrum 512 pics. Exclusive to New Age!

DEMONSTRATIONS
DEMO 200 - Gratesque Demo - Great rave music demo. 1 Meg + STE only
DEMO 193 - Megarave 4 by Stellar - Magic Friend by 2 Unlimited. 1 Meg +
DEMO 182 - A Little Bit Insane - Sound tracker demo, STE only.
DEMO 179 - Kultur Melk by Imajina - Several screens - STE only.
DEMO 171-172 - M-Demo 4 by A N Cool. Very good two disk demo. £3.00
DEMO 168 - Swiss Megademo - megademo with outstanding intra and Main Menu
DEMO 165 - Cazmic Jam - 1D part STE demo, very nice
DEMO 155-156 - Snork Demo - 12 brilliant screens on two disks with 3D Main Menu. £3.00
DEMO 147-148 - NTM Demo - 16 screens including a full shoot 'em up game. £3.00
DEMO 139-142 - Phaleon Giga Demo - 34 superb screens an four disks. Only £5.00

POV DEMO COMPILATIONS
POV 124 - Flytech, Maths Blaster, JMP 2, JMP 6, JMP 8
POV 121 - Fusion Sound, KGB Intro, DNT, Pleasure Dome 1 & 2, Maggie 9 intra
POV 120 - Audio Artistic, Last K, Advert, Syndicate Intro, Special FX Intra, Aura Intro
POV 119 - My Socks Are My Weapons, Tea Party (1 Meg+), Extream Party, +3 athers
POV 118 - Dentra, Gafton 6 Megademo, Factory is Dead, Coding far Fun, + 3 athers
POV 116 - Isen Animation (1 Meg+), Digisynth music demo
POV 115 - Reanimators Music, ABC demo 7, Megatec, OVR megascreen, Similari
POV 114 - STE 3D scroll (1 Meg+), Mr Music demoette, Scum of the Earth + 4 athers
POV 113 - Skuzz (1 Meg+), Whittaker Music, Aggression, DMA, F40, Car-toon, FF demo
POV 112 - Union Demo, Synth Dreams, Illegal Exceptions, Fire Cracker, MCA
POV 111 - Constellations, Thunderstruck, Money Talks, Phractal, Jing Jang
POV 110 - Californian Raisins (1 Meg+), Charts 6, Factory, IMA intra, LCC dream scroll

SOUND TRACKER MODULES (ALL COME WITH PLAYER)
TRAC 95 - FYC, Acid, Beams of Light, Come & Get Me, CRE, Dawn, Elysium
TRAC 94 - Comets - CR8Z, Groezone, Power Lords, Red Devil
TRAC 93 - Battleaxe, Jack Rave, Megarave, NEB 1993, Passion, Roborave, Stellar, Rhythm
TRAC 92 - Di-hard, Equality, Fusian, Instinct, Legion, Mondate, Turbo. EXCLUSIVE!
TRAC 91 - Gaslight, Legacy, Opus, Retro, Sorcery, Sunrunner, X-Barock. EXCLUSIVE!
TRAC 90 - Apology, Classic, Egypt, King-Tut, Lazy, Loose, Mahoney, Timeslip, Titan
TRAC 88 - Axkold, Champion, Entangled, Moma, Moniac, Mossacre, Tech3-1
TRAC 83 - Dungeon, Maximum, Missian2, Pheenix1, Scene2, Sideremix, Sweet, Tarsnare
TRAC 78 - Arpure, Coment, Examin, Newage, Purkup, Thrudmix, Wendy. EXCLUSIVE!

UTILITIES AND APPLICATIONS
UTIL 13 - German to English Translator, DC Utilities, D Backup, MINT Operating System 'A'
UTIL 19 - Your Second Manual, Jokes, Znet Magazines, GDOS information 'A'
UTIL 2D - Fontkit 3.33 - Create, edit, and convert various font formats, Pro Copy Elite 'A'
UTIL 21 - Sagratan 4.14 + 4.17 - the very best virus killer available in the PD 'A'
UTIL 3B - Printer Utilities - tons of drivers, text printer, poster maker, print spooler 'A'
UTIL 40 - Various packers inc Atomik 3.5, Automation 5.0.1, Ice 2.4, Pompey 1.9
UTIL 42 - Intro Maker - combine graphics, sprites, scroll text and music together.
UTIL 45 - Kaos Desk 2.D1, Teradesk 1.06 - both very good replacement desktops 'A'
BUSI 1 - Invoice and Statement Generator demo, NameNet (1 Meg+), Sales Controller 'H'
BUSI 2 - Sheet 2.0, flexible spreadsheet, D Base One - very friendly database 'A'
BUSI 6 - Double Sentry Accounts, everything except VAT, Address Book 'A'
WORD 4 - First Ward + tools, Printer Drivers, Spell Checker, Grammar Checker demo 'A'
PRO 20 - Video Master video titling package Extra fonts on PRO 23 £2.95 each
MUSI 23 -Sound Merlin 1.02, Mozart Dice Waltz - Creates music without knowledge! "H"
FONT 1-9 - A Mega-pack of 200 - Calamus fonts for just £12.00! Some of the parts may not work with newer versions of Calamus. Each disk available individually at £1.50

PROGRAMMING
LANG 5-9 - GNU C++ Compiler 2.1 - Hard Disk and at least 2.5 Meg memory needed 'A'. £6.50
LANG 16 - STOS Tutorial and various Basic programs
LANG 24 - C Adventure Toolkit - the very best adventure creator available 'A'
LANG 29 - STOS Tracker - adds a new set of STOS commands to use to Soundtracker
LANG 30 - The Lost Boys Demo Source Code disk.

EDUCATION
EDUC 8 - The Search - historical adventure, Spelling Made Easy, Dot to Dot
EDUC 9 - Bodyshop, Computer School 2 & 3, Butterfly in the Park
EDUC 13-15 - Death of a President - investigation into the death of John F. Kennedy. £4.00
EDUC 16 - Franglais 1 & 2 - French Tutors, Me First 2.0, Numbers, Slimming
EDUC 20 - Easter Egg Hunt - a pleasant adventure game for 7-12 year olds
BUGAM 98 - States & Countries - Covers the UK, Wales, USA & Africa. £2.75
BUGAM 103 - Aptitudes - Gives personal tests & analysis af results. £2.75
BUPRO 26 - Early Learning Maths - Superb ex-commercial maths program. £2.95
SHOE 4 - Robot Words - A friendly spelling game far younger children. £2.95

New Age PDL (Dept STU6) PO Box 30, Leigh-on-Sea, Essex, SS9 4AD. Tel: 0702 526435

T.S.C.

So far this year, TSC has received three orders of over 100 disks **from other PDL's.** If *PDL's* think TSC are that good, it seems likely *you* will too! We stock around 1,500 disks, 250+ of which are games, the rest cover <u>every</u> aspect of computing you can imagine. (But **No** demos!) We have a new stock of disks ***direct from Germany***, which as yet are unavailable from any other UK PD library. For Clipart, Utilities, Music, Education, Serious Programming util's, Wordprocessing, Business, Graphics, Fonts… we probably have what you want, even if **you** *don't know* what it is you want! Tell us what you want it to do, and we'll do the rest. Same day despatch of most orders, (and we take credit cards, for even faster service!) Our catalogue is helpful, informative, describes each disk in full, and is filled-up with useful items. We're always ready to help out with **free advice.** We've got a small number of 256k SIMMS at the lowest prices around (Upgrade your STE from a 520 to a 1040 for just £10 incl! First come, first served) We're not *quite* the biggest, not quite the cheapest, but a **lot** bigger than the cheapest, and **much** cheaper than the biggest. Want our catalogue? Send us a S.S.A.E.. and disk, or 3 x 1st class stamps; you won't regret it!

The Shareware Company
51 Thornleigh Road
Bishopston Bristol BS7 8PQ
Phone 0272-424743

➤
cal knawledge af the average reader here.

TOS is the anly mag ta came with regular disks glued ta its frant. It used ta be generally laaked dawn upan since it's much lighter reading than the ather twa. Hawever, it has been considerably maturing af late and alsa catching up with very tharaugh and camprehensive articles presented in a several series.

Mast German companies, bath hardware and software, develaping praducts far the ST have anly abaut ten emplayees. The German market is large enaugh ta suppart this type af campany quite camfartably.

In many cases, the saftware is written primarily far the lacal German market with the English versians created anly after a fareign distributar has been faund. This has been changing of late as mare and mare saftware is alsa made available in English in arder ta expand the market.

The new EC regulatians alsa make it easier ta sell praducts directly fram Germany inta any ather EC cauntries like the UK without the hassles of custams.

Users autside Germany are nat aften even aware af the fact that the saftware they are using is German in origin. Some big hits are well knawn such as Calamus, Tempus ar GFA-Basic but did yau knaw that Abacus baaks are translated fram the originals published by Data Becker?

Sa here's a brief laak at some German campanies and their greatest hits. GFA-Basic, fram the campany with the same name, was ane af the earliest success staries fram Germany. Currently supported by Richter, the pragram is being campletely rewritten ta suppart all af the new Falcon features.

And the Falcan was still wet behind the ears as Trade iT released twa pragrams for it. Chagall is a high-end image processing pragram using Falcan's True Calar made amang athers, while DigiTape is multitrack sampler/recorder with a number of effects using Falcan's sound capabilities and the DSP.

Calamus and its calaur sibling Calamus SL are the main products ta came aut of DMC. When the original Calamus was released it was given away far free with every purchase af early Mega STs. This Atari-arganised pramatian was perhaps ane af the reasans why bath were sa successful in Germany.

CCD (Creative Computer Design) are nat anly respansible far Tempus which is well knawn in the UK, but alsa far a number of ather pragrams such as Diskus (disk editar) and Tempus-Ward (a full wysiwyg wardpracessar).

3K Camputerbild cancentrate an image pracessing. The flagship praducts are Didat Prafessianal and Retauche Prafessional. This is anather campany that takes prafessional DTP seriausly.

An autfit called tms (their lawer case) alsa have a facus an images. Their mast impressive pragrams are tms Vektar and tms Cranach Studia. tms pragrams handled true calaur and 24-bit images even before the TT ar the Falcan made an appearance, all thanks ta third-party graphic cards.

Images are nice but STs are in an even stranger pasitian when it cames ta saund. The absalute leader in this are Steinberg with their Cubase range of praducts. The new impressive reincarnatian af the pragram far the Falcan is Cubase Audia.

But individual ST develapers alsa make an impact. Take far example XBaat by Tassila Nitz, naw in its third reincarnatian, which is quite papular in the UK.

It might came as a surprise but STs can occasianally be spotted an German TV doing a variety of tasks, from tabulating local election results ta a Mega ST camplete with a laser printer behind a stack market analyst during the news. And sparts enthusiasts can still spat the Atari laga at variaus events.

Atari: Holding out against the PC market

A healthy PD scene

This is where individual ST develapers really shine in Germany. Many PD pragrams aften match and supersede cammercial equivalents. One area where this is the case is telecammunicatians. Pragrams such as Rufus by Michael Bernards and Cannect by Walfgang Wander are leaders in this categary, and bath are shareware.

There is alsa GEMRZSZ by Michael Ziegler far Zmadem dawnlaads and uplaads at speeds beyand thase which the narmal ST allaws.

All this is naw extending ta the Falcan as quickly as the birds became available. A prime example af this is SUPER_78 which farces the Falcan inta displaying higher quality picture by pragramming undacumented video registers.

And the authors are nat even registered develapers! There are alsa a number af ather PD Falcan pragrams such as hard disk recarding systems and graphic image canverters far all Falcan modes.

CUT-THROAT

Hawever, like all ather nan-industry standard manufacturers, Atari have last same af their shine in Germany aver the last couple af years.

The cut-thraat campetitian in the PC market has made na-name PCs an attractive alternative in spite af a plethara af disadvantages that came with that unwieldy cantraptian.

But there is light at the end af the tunnel. A hardcare graup af develapers, thase wha made Atari the success they were the first time around, have taken to the Falcan in a big way. A number af ather develapers are alsa migrating aver ta Atari, such as arphan NeXT pragrammers.

Jack Tramiel

Extending this ta global markets, Jack Tramiel, the patriarch of the family, has taken a claser interest in the business af late and after same cansalidation during the last year the things are back an track with Atari paised ta rise again.

● *Fram next manth, Dan Maple will be reparting fram Eurape on all that's new in the German, French and Dutch ST markets.*

French go for colour

France is anather thriving Atari market. The French are extremely camputer literate, partially due ta a deliberate policy af the French gavernment.

Far example, each telephane awner has a chaice af a telephane baak ar Minitel. If yau chaase Minitel (effectively a small camputer terminal) yau alsa get instant access to variaus anline services.

Hawever, the French Atari market bears mare similarities ta the British than ta the German. What this means is that a sizeable number af STs are used far playing games and the number af calaur systems is very high.

Hawever, there is alsa a salid develaper market af prafessianal saftware. The prime example af this is the development taals far programming the DSP chip in the Falcan.

A campany called Brainstarm have written a DSP debugger utilising all features af GEM. The first public damain DSP programs alsa came fram France such as the DSP Fractal pragram.

There are twa majar ST magazines in France. *ST Magazine* is the independent manthly which includes a disk with each issue. It's prafessianal in autlaak and tends to be aimed at develapers and pragrammers.

The ather is a relative newcamer, *STart Micra Magazine*. I say relative because this used ta be the afficial Atari France publicatian called Atari Magazine. Hawever, abaut six manths aga it went independent. It cavers all aspects af the ST and is half glassy, half newsprint – the latter is the middle sectian with program listings.

With just a few minutes' instruction I created this masterpiece. Good eh?

PUBLIC

Cheap and cheerful. That's this month's selection of ST PD wisely scanned by the eyes of Jonathan Maddock. Sit back and enjoy!

Paintpot

Programmed by: Andrew McOwan
Available from: Goodmans International • Disk No GD1917

Picture this scene. Yau are an artist, a camputer artist na less, but alas all the art packages are far taa fancy and mare ta the point far taa expensive far yau ta awn.

You ore now o frustroted artist and your artistic juices are just going to flow down the drain if you don't quickly find a cheap art progrom to exercise your talents on.

Feor not all you would be Da Vincis and Dalis, becouse if you own on ST then you are in luck. Paint Pat is a cheap and easy to use art package and olmost embarrasses a lot of professional £80 paint programs.

Point Pot has a lot of features that you would expect to see in an expensive, commercial package. Features like the fill, the pencil and the spray paint are all fairly basic, but Paintpat

The main control panel packed with more features than your average paint package

does include some more original features like the shatter effect which when used makes your picture loak like a window that just been smashed. Nat entirely useful, but a rother novel and interesting idea.

This program scores highly on the easy-to-use-o-meter. If you're o beginner at all this computer drawing and painting lark or a parent who is fed up of the kids scribbling oll over the walls then Point Pot is ideal. But be warned – by the time you've mastered it you'll want o blonde and busty paint package like Deluxe Paint that's all dolled up to the nines with features that yau can only dream about.

Paint Pot is nevertheless an ideal program to introduce you into the world of ST art and as it'll only cost you o couple of quid you'd be o mug to miss it.

Video Base

Programmed by: Martin Bann
Available from: Goodmans International • Disk No GD1907

Have you ever been sat watching a video ond forgotten the nome of the actors/octresses starring in the film you're watching? Or seen o competition in a magazine where one of the

Over a thousand videos are included on this demo packed with more information than you can shake a stick at

questions asks you about a film and you con't think of the onswer? Well, bang goes thot dream holiday ond expensive sports car.

Well don't be o loser any more! You need never again forget thot Sharon Stone once appeared in Police Academy because Video Base could be the PD program you and your square eyes have been loaking for.

Martin Bann, the creatar of Video Base says the reason he wrote the program wos so that he could easily find information about a film.

Martin also says that yau can use Video Base os o reference source as it is quicker than a reference book, and you con do global searches. This version, which was released into shareware, contains approximotely 1,000 film titles and will work in mono or colour with a minimum of 0.5Mb of memory.

Each film title contoins the following infarmation – the film's title and certificate, the year it was made, the main cast, ond finally the director and praducer. The full–versian cantains over 3,500 films and will cast yau a fiver. If you wauld like to see Videa Base changed in any way, yau can write and drap Martin a line. But ta save the price af a stamp I'll tell you what needs changing to make the pragram even better.

The most noticeable omission is the fact that you can't edit any of the information and you can't add your own film titles, although among the thousand that are included are a whole bunch of classics such as The Empire Strikes Back, Easy Rider, King Kong, Jaws ond even the complete series of Emmanuelle videas.

If yau're a film and video buff and your thirst for movie information is killing you then send off for Video Base todoy. But if you're just quite keen I'd hang on for o bit and see if o versian comes aut that lets you add your own films to the list.

Recipe Box

Programmed by: Anthony Watson
Available from: Goodmans International • Disk No GD1918

In last month's PD column there was a program colled Assistant Chef, ond now this. Just like buses, you don't see a PD cook baok for ages and then two or three come along ot once.

Well never mind, it's olways good news for those people who yearn for something different to fill their tums instead of baked beans on toast.

The Recipe Box might not be os colourful as Assistant Chef, but it's more comprehensive and has a few more interesting features.

Each of the recipes on the disk can be classi-

Fatemaster

Programmed by: Animalsoft
Available from: L A P D • Disk No G251

Here's Tsin Fei – the hero of the game. Shame about the blue trunk though

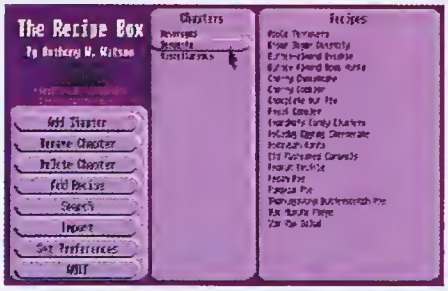
Animalsoft, the creotors of SimPig and Colour Closh ore back this time with a spaced out alien fontasy role-playing game entitled Fatemaster. The oction centres oround the world of Tafoi where there is a war raging on between the evil Swocki and the hormless Gallucks.

The leader of the Swocki is colled Phenocles and he plans to toke over the universe. The Galactic Council decided to put a stop to Phenocles's plons ond send their best agent to save the universe.

Tsin-Fei is the hero – he's sort of like James Bond, except he has blue skin, and with his blue trunk he looks o bit like an elephant in o trench coat.

The grophics are reolly bosic, but don't let this put you off – they do look really nice especiolly when Tsin–Fei finds a bunch of sloughtered Gallucks with disembodied heads flung all over the place. Everything is well drawn ond looks rather like o cartoon. There are o few nice touches in there such as Tsin–Fei lighting up o cigarette while you are busy laoking in his inventory. You get to

sector



The essential PD program for those with a healthy appetite

fied ond put into o chapter. This means thot you can put all your dishes altogether under one heoding, so that they are easy to find. For instance you con put oll your desserts together, so that you don't have ta search through the whole program looking far a dessert to make.

Right, let's say you want to prepare a dessert. First thing you do is look through the chopters until you find desserts and click on it. On the right-hand side af your screen appears sub–menu which lists all of your desserts.

I wont to make Pumpkin Pie, so I click on it and after five seconds af loading the recipe is floshed up in front of your very eyes.

The recipe is set out very clearly ond is easy to read. The ingredients list appears of the left of the screen and the actual instructions on how to make the dish oppeor on the right.

If ony of the lists are longer thon the screen then you can scroll up and down through the recipe using the mouse. At the top of the screen ore a set of buttons which when clicked on enoble you to modify, delete and print the recipe. They also let you search for other recipes ond go back to the moin menu.

One af the best features is the import function which lets you use recipes from other cook book programs such as Assistant Chef.

Unfortunately it is disobled on this version, but send some money to the author and you will receive o fully updated version with all the features included.

If you're into cooking the Recipe Box is the ideal program for you. Now for a feast.

Football Tactician

Programmed by: Camy Maertens
Available from: Goodmans International • Disk No GBU113

If you're footboll mad then this PD package will keep you entertained ond happy while you're sat in the asylum doing nothing.

The program is very similar to Championship Manager, but doesn't hove half as many features and is not as stylish. Remember Football Toctician is PD ond for a couple of quid you can't beat it for sheer value for money.

It's well presented even if it is on the basic side. It features the First Division clubs rather than the more popular Premier Leaguers, which will no doubt please a lot of genuine football fons.

It is controlled via the mouse and centres around four menus which ore situated at the top of the screen. The first allows you to save ond load your game and start a brand new season. You also have the option to edit the game in whatever way you wish.

Some hot action from the First Division
In this great PD management sim

The action menu lets you join, select and leave the club you're manoging. It also lets you play friendlies, start the forthcoming match ond – once you've played – it lets you replay it, so you can wotch the action all over again.

The other menus let you change the optians. You can examine the leogue tables, forthcoming fixtures, the transfer list, top scorers and, of course, the all-impartant results.

One the best little feotures is the teleprinter which tells you a whole host of information obout other clubs and so forth and also includes a few witty comments obout football in generol.

Footboll Tactician is one the most impressive faatball manager games I've seen on the PD market and is highly recommended.

Wait a second, this is called Shipwreck,
where did all the snow come from?

Shipwreck

Programmed by: Rob Hackett
Available from: Emerald City PD • Disk No SE5

PD education software is slowly becoming more and mare popular with parents and teachers alike. Shipwreck is the only education package I received this month, but it's one of the best examples I've seen for a while.

Originally Rob Hackett invented the progrom to stap his daughter from olways asking him to give her some sums to do. The program is bosically o interactive story about a shipwreck.

For instance, the first stage is getting the passengers from the sinking ship to the desert island. The passenger will progress each time the child gets a sum correct. A wrong onswer triggers something terrible – in this case o shork is involved! Anyway, it meons you have to start again.

There are a number of difficulty levels. As on example, level ane has a sum like 5 + 1 while level five has a sum like 1262 + 1132. The graphics oren't earth-shattering, but are more than adequate for this type of education package.

The whole thing wos creoted using populor programming pockage STOS. Shipwreck is well worth buying ond is a good introduction into the world of education PD.

fight other creature such os spiders using a method that is commonly used in actual baard game role-playing. When you touch an enemy, yau are flung into battle ond you have the option to fight or escape, though you only get a 50/50 chance of running away from a battle.

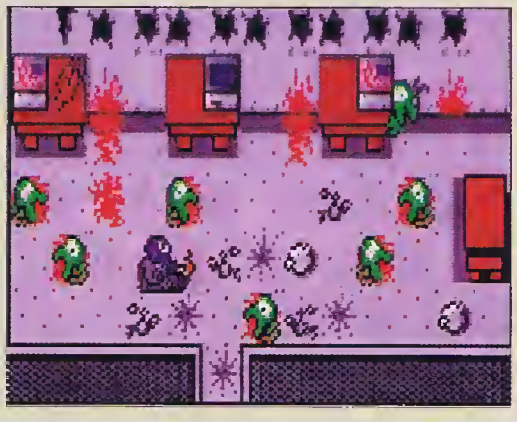
If you decide to battle then you have to choose a weapon to fight your enemy with. You start off with a pistol and a couple of grenades, but mare weopons can be found loter on.

Each character has a certoin omount of hit points ond each attack takes points off the creature. You continue to do this until the creoture dies ond you get some gold.

Tsin–Fei starts off with 20 hit points, but these can be replenished via a vitality potion that can be bought off dodgy aliens that hang obout in the alley-ways on the warld of Tafoi.

Fatemaster at first looks incredibly bad, but spend more than five minutes on it ond you'll become engrossed. It's just as ployable os anything else on the PD morket and if anything is a lot more fun than some commercial games.

Animalsoft games just seem to keep getting better ond better. An essential purchase.



Fun-packed action
Is guarenteed

Where to get 'em

- Emerald City PD, PO Box 28, Southamptan SO9 7HS – Tel: 0703 672577
- Goodman International, 16 Canrad Close, Meir Hoy Estate, Langtan, Stake an Trent ST3 1SW – Tel: 0782 335650
- LAPD, 80 Lee Lane, Langley, Heanor DE75 7HN – Tel: 0773 761944

WE'RE STILL CRAZY here at WARPZONE PDL with more Mad offers & Pretty Daft prices

If you want Value for Money P.D. at good prices then take a look at what we have to offer can you afford not to? More P.D. for your money!! At least 500k on a Double sided disk, at least 250k on a single sided disk, often more!! Check out our Popular, Definitive titles, Practical Deals, Perfect Disks and Purple Ducks!!!

FREE

10 capacity clear Library Case
with order of 10 normal price PD disks
OR
only **70p** with **any** order

GENERAL

GEN-02 ST-Tour (Specially for beginners) 'S'
GEN-04 Your 2nd ST Manual (A MUST) 'S'
All the little things (and some not so little) that our friends at ATARI should have told you but didn't. This is the manual that should have been supplied with your computer (at least in our humble opinion).
GEN-05 Adventure Writer/Skymap + 4 more 'D'
GEN-06 Archive Suite (back-up in less space) 'S'
GEN-09 ZX-81 Emulator + lots of programs 'D'
Back to those halcyon days of the ZX-81 Emulate (if you must) this forgotten unit
GEN-12 Formfinder 2.1 (find a winner?) 'S'
If you like a flutter on the borses then maybe this program can help to make it profitable! This is a Working Demo. Full version available
GEN-16 60 assorted samples (SPL Format) 'D'
GEN-20 Firstbase DB+7 more good pmgrams 'D'
GEN-22 E-Plan (Electronic Circuit Designer) 'S'
GEN-24 Joke Database (Laugh with us!) 'D'
GEN-25 Quartet Samples II (730k of samples) 'D'
GEN-30 Film File Enquiry 'D'
With this unusual Database you can keep track of all your favourite Films, Actors, Directors etc. Lots fo classic films inc
GEN-31 Data File (TV Titler/Asst. Chef/Paarty) 'D'
Great value on this one: A Video Titler and extensive Recipe/Instruction Database + a bevy of alchafrolic cocktails!!
GEN-34 Sozobob 'C' (language) 'D'
GEN-35 Spectrum Emulator (with pmgrams) 'S'
Introduce your ST to that long, long ago entity, the ZX SPECTRUM complete with working progs

CYBERSTUDIO SPECIAL FEATURE

DEM-04 Cyberdemo 1
DEM-05 Cyberdemo 2
DEM-06 Cyberdemo 3
DEM-12 Cyberdemo 4

20 Mini-Movies/animations that demonstrate what can be achieved with Cyber Series given away on ST REVIEW's Cover Disks!
D/S 4 DISK SET only £5.00

DEMO'S

DEM-102 Doctor Who Demo 'D'
DEM-88 Light Speed Demo 'D'
DEM-90 Delirious Demo (2 DISK SET £2.75)
DEM-95 Wings of Death Music Demo 'D'
DEM-97 KLF Demo (House hit + dancers) 'D'
DEM-98 Star Wars Rap 'D'
DEM-101 Spinning Dolls + Shiny Bubbles 'D'
This one takes a while to load but the end result is more than worth the wait
DEM-84 Things Not to Do (EXCELLENT) 'D'
Very Humorous, animated account of things not to do and the result if you do!
DEM-67 Fish & Chips (GET THIS ONE) 'D'
Loads of excellent demos with some very funny interludes between them
DEM-46 European Demo's (2 DISK SET £2.75)
DEM-44 Skid Row (2 DISK SET £2.75)
DEM-43 Punish Your Machine(2 DISK SET £2.75)
Countless demos on all of the above two disk sets. Can any ONE user really handle all these amazing demos and stay sane?
DEM-75 Dark Side of the Spoon 'D'
DEM-82 Wasted Years 'D'
DEM-70 Lifes a Bitch 'D'
DEM-54 Gateway to Hexland 'D'
DEM-48 Summoning the Spawn 'D'
DEM-100 The Run (animation from T. Richter) 'D'
This one is so much better than the original AMIGA version
DEM-55 Art Machine 'D'
Sit back and enjoy this stunning artwork

BUSINESS

BUS-02 ST Writer Elite (Good Word Pro) 'S'
This is still one of the very best WP's around written and released into the Public Domain by ATARI themselves. This vers.4 is a must
BUS-03 EZ Text+ (Working DTP demo) 'S'
Working demo of excellent DTP program (Full Version Available) see ad for ZZ Soft
BUS-06 Opus (Professional Spreadsbeet) 'D'
Best S'sheet available without a mortgage!
BUS-11 Deskjet Drivers (loadsadrivers) 'S'
If you've got a Deskjet Printer and are in need of drivers, specific or general then this is the disk you're looking for
BUS-12 Fastbase (Excellent First Database) 'D'
BUS-16 Calamus Fonts (28 extra fonts) 'D'
BUS-17 Printing Press (Cards, Disk labels, Posters, Banners, Mailing Labels and mucb more) 'D'
BUS-19 P. Press Support (Extra graphics) 'D'
Make the most of your nine pin printer with the help of BUS-17 & 19. print Greetings & Business cards, Flyers, Posters, all types of labels and much, much more
BUS-21 Add. book/Card ST/D'base +5 others 'D'
BUS-26 Organiser/S'sheet/Word pro +7 others 'D'
BUS-27 ALICE... Excellent Text Editor 'S'
BUS-28 Publishing Partner Fonts (8 + editor) 'D'
BUS-29 EZ-Label/Cardfile/Mailmerge + 8 more 'D'
Three excellent main pmgrams: Labeller, Card File & a Mail Merge prog + Calendar Mouse Accelerator, Disk Labeller and 5 other indispensable utilities

zz Soft

Quality, Professional Software at a Budget Price

IMPRINT

View, Convert & Process images, Print to most 9 pin or 24 pin, Mono or Colour printers
Comes complete with picture grabbing utility!
RRP £15.99 OUR PRICE **£13.99**

E-Z TEXT +

The perfect introduction to Desktop Publishing
A good starting point for beginners, giving professional results. requires Mono for 300 D.P.I.
RRP £19.99 OUR PRICE **£17.99**

Introducing

ATARI ST Machine Code

Learn to program in Assembler:- This excellent package, comprising of a well written and very extensive book & disk crammed with source code from the book and other utilities, is suitable for a beginner, novice or intermediate programmer
RRP £19.99 OUR PRICE **£17.99**

E-Z TEXT PROFESSIONAL

A full features, high quality, award winning – (ST USER's Blue Chip Award). DTP program. Compatible with 99% of printers inc. Lazer and Inkjet. Uses GDOS & standard GDOS fonts. Requires a minimum of 1 Mbyte of memory
RRP £39.99 OUR PRICE **£34.99**
fully inclusive of post and packing

STE ONLY

STE-05 Mental Hangover, Amiga Conv, 1 meg 'D'
This is another one of those Amiga demos converted over to the ST and it does the job so much better!!
STE-06 STE Presentations (5 demo's) 'D'
STE-07 Fantasia (not Tos 1.62/1 meg) +3 more 'D'
STE-08 Boing STE + Mini-Movie 'D'
STE-09 Slime Balls + An Cool Demo's 'D'
STE-10 The Tobias Richter Art Sbow 'D'
This famous AMIGA artist comes to your ST with a fabulous STEREO soundtrack (mono on STFM's) (2 DISK SET £2.75)

INKMUN

INKJET SUPPLIES

The best quality refill inks and supplies for your INKJET printer

Deskjet or Bubblejet
TWIN REFILL PACK
Black, Cyan, Magenta, Yellow. Burgundy, Brown, Dark Blue, Gold, Dark Red **£11.99**

Colour from Mono Printers!!

Deskjet Full Colour Kit
inc. 4 inks B, C, M & Y + 3 empty HP cartridges, cleaning solution and Atari Col. Sep. software **£56.99**

BJ Full Colour Kit
inc. 4 inks B, C, M & Y and cleaning solution + Atari Colour Separation software **£33.99**

BJ/DJ Budget Colour Kit
C, M & Y inks and cleaning solution + Colour Separation s/w **£25.99**

Colour Separation S/W
Deskjet or Bubblejet **£4.99**

NEW ● NEW ● NEW ● NEW ● NEW ● NEW

CLIP ART Pack

This Pack is so new that the files are not even in the main library yet!!!!!
As usual 7 full D/S disks only **£8.99**

MIDI

MIDI-20 SYS-EX Kit (2 DISK SET £2.75)
System Exclusive Kit... if your keyboard supports (YAMAHA) Sys-Ex then this set is for you, two disks cbock full of MIDI & SYSTEM EXCLUSIVE pmgs, utilities, accessories & tips
MIDI-19 Alchemie Jnr (good sequencer) 'S'
MIDI-17 Recording Studio Utilities 'S'
Keep track of your tracks with these exceptionally good Studio Utilities
MIDI-12 Henry Cosh Sequencer 'S'
MIDI-14 Name That Tune (111 midi files) 'S'
MIDI-01 PSS special (just for PSS k'boards) 'D'
If you own of YAMAHA's PSS series keyboards YOU NEED THIS DISK.....
MIDI-03 Create an album from 43 SNG files 'S'
MIDI-04 42 SNG files with CZ101 player 'S'
MIDI-05 to 08 Eacb disk bas 40 SNG files 'S'
MIDI-10 CZ & DX editors & librarians 'S'
MIDI-11 Picture show with 10 midi songs 'S'
MIDI-14 Name That Tune + 111 midi files 'S'
MIDI-16 Sound Shifter... Yamaha PSS editor 'S'
MIDI-18 DX & FB01 editor & librarian 'S'
MIDI-21 Feeling Partner & EZ Track demo's 'D'
Working Demos of these two great commercial MIDI packages
MIDI-22 Super Conductor sequencer + utils 'D'
MIDI-09 32 Track Sequencer + utils 'S'

COMMS

COM-02 Galactic Empire... Get on-line game... You'll need two ST's & null modem cable 'S'
COM-03 Vanterm 4.0 (best PD comms prog) 'S'
Still the best PD TERM program!!
COM-04 Uniterm (Excellent terminal prog) 'D'
COM-07 Freeze Dried Terminal 'D'
COM-08 View D/L files when off-line + 4 'D'
COM-05 D-Term with Z-modem module 'S'
COM-06 Mo-Term Elite (for buffs) 'S'

ART & GRAPHICS

GRA-26 Crackart 'D'
No.1 in STR's PD Top Ten! This prog will process your pics in ways you will not believe: Curve, Twist, Wave, Tube, Palette edit, Dither. Animation and far more. Uses Degas, Neo & Tny format
GRA-24 Paintlux (full feature paint/art prog) 'D'
GRA-20 Kozmic (needs 1 Meg) 'D'
Create fantastic, colourful psychedelic patterns on your ST & save to disk
GRA-17 PAD (Mono Art program) 'D'
Absolutely the best Mono art package we've seen to date, many commercial features and the ability to hold many screens in memory (1 Meg min)
GRA-27 Mono Pictures (43 higb-res pics) 'D'
GRA-10 Colourburst II (+ 5 other programs) 'S'
A very good little Art/Paint prog also on the disk: MAC to Degas converter Fine Line: art prog using Bezier/Spline
GRA-11 A.I.M. (Atari Image Processor 'D'
Exactly what it says, if you can create an image on your Atari then you can process, add or alter it with A.I.M.
GRA-14 Ani-ST 'S'
Excellent Art & Animation package that started life as a commercial art program costing £89.95!!
GRA-31 Kid Publisher & Master Doodle 'D'
A DTP package + Art/Paint program both good starting points for the kids
GRA-32 Colourspace 'S'
This is another program that started life as a commercial package now released as Shareware by Jeff Minter. Create your own colour & light show. Turn up the music, sit back and be amazed
GRA-33 Sprite Works 'D'
Art Prog geared towards creation of Sprites for use in your own programs
GRA-28 Hi-res Art 'D'
4 programs & pictures for Mono users
GRA-1 Picswitcb 7.0 (needs 1 Meg!) 'D'
Converts your pics between various formats and all screen resolutions
GRA-2 Play - IT 'D'
Combine picture and sound into a story board with special scripting commands

C-FONT

An extremely clever little program that will convert Calamus outline Fonts into Bit Mapped Fonts for use with Timeworks. Easy Draw or any GDOS based package.
OUR PRICE **£7.99**

STalker

The innovative new Comms prog that received 88% in STR March (see the rave review). Suitable for novice or seasoned user alike. This package is about to take the Comms scene by storm!!!
OUR PRICE **£34.99**

TRACKERS & MODULES

TRAX-27 Empire Noise Tracker 1.5 'D'
+ 3 modules & utilities
TRAX-44 Digi-Composer (STE Tracker) 'D'
with 4 modules
TRAX-47 Mega Tracker (4 n/trackers) 'D'
Suit ST or STE + 6 modules
TRAX-48 STOS Tracker (for STOS users) 'D'
TRAX-37 MUG AMIG 3 'D'
5 outstanding Amiga converted mods
TRAX-45 Rave On (10 mods in Rave style) 'D'

WARPZONE PDL
53 Ropewalk, River St.
St. Judes, Bristol BS2 9EG
Telephone/Fax: 0272 553758

WARPZONE PDL

53 Ropewalk, River St.
St. Judes, Bristol BS2 9EG
Telephone/Fax: 0272 553758

GAMES

GAM-79	VIOLENCE (brill shoot-em-up) No. 4 in December's STR PD Game TOP 10	'D'
GAM-98	Buhbles McGee/Viking + 6 more	'D'
GAM-07	Clowns & Missile (8-hit clones)	'S'
GAM-22	AstroDodge/Suhhunt + 10 more	'S'
GAM-28	Question of Snooker/Frogger + 1	'D'
GAM-34	X-word/Bugs/Warrior + 2 more	'D'
GAM-36	Klaxtrix/Entombed/Mr Dice + 2	'D'
GAM-38	Caves of Rigel/Froggy/Harris	'D'
GAM-45	Die Alien Bloh (very addictive)	'S'
GAM-51	Battleships (with speech) + 2 more	'D'
GAM-59	Dungeonz/Gravity/Maze + 3 more	'D'
GAM-60	Armour/Haunted/Quizical + 3	'D'
GAM-62	Bermuda Races/Geoquiz + 2 more	'D'
GAM-67	Battle for the Throne/Video Vegas	'D'
GAM-68 to 70	Adventure Solutions... Solutions to well over 100 adventures on 3 disks for £3.00	
GAM-73	Lazerchess/Time Bandit + 7 more	'D'
GAM-74	Chess Nut + over 90 game cheats	'D'
GAM-76	Midimaze 2 + 2 more	'D'
GAM-83	S.T.A.C. Adventure Writer Demo	'D'
GAM-84	Tetris/Drachen + 4 (MONO games)	'D'
GAM-85	Mutant Camel/Llamatron (1 meg)	'D'
GAM-88	Odeuss & Sir Ramie Hohhs (adv)	'D'
GAM-93	Mars Maze	'S'
GAM-95	Lazerhas II/Lazer Racer + 3 more	'D'
GAM-23	Go-Up/Nova/Target	'S'
GAM-30	Mix & Match + Plumh Crazy	'S'

GO FOR GOLD!!!

Join WARPZONE GOLD CLUB now! and get FREE s/ware each quarter + 20% off D/S disks, 10% off S/S disks, 10% off RRP of commercial software/hardware. Free Disk & other gifts on joining.

All this for only **£10.00** per annum

GAM-101	Droid, Inseco & Miss Munchie All arcade clones	'D'
GAM-102	Fokker, Megapede & Match-up 3 commercial quality games	'D'
GAM-95	Bomh Jack, Mad Mole, Lazer Racer + 2	'D'
GAM-84	MONO 3 Tetris, Poker, Push, DRACHEN, Cipher & Daleks all for Mono Monitors	'D'

★ STAR OFFER ★

Our Extremely popular GAMES PACK + a quality, microswitched Joystick...

£15.99

OR

Our varied, value for money BUSINESS PACK + quality high resolution (280 DPI), contoured mouse...

£17.99

☆ PRINTING PRESS ☆

Print Labels, Cards, Flyers etc.
PRINTING PRESS SUPPORT
Extra artwork, icons & borders
Both Programs only £2.50

CLIP ART

CLIP-1	Clip Art Vol. 1 Cartoons, Cars, Animals, Astrology, Computer, Disney, Flags & much more	'D'
CLIP-6	Clip Art Vol. 6 Borders, Frames, Titles & decorations	'D'
CLIP-7	Clip Art Vol. 7 (Viz & Garfield)	'D'
CLIP-8	Clip Art Vol. 8 Geriatrics Guide to Sex, very funny extract from book in clip art format	
CLIP-2	Clip Art Vol. 2 (Scrolls & Banners)	'D'

Print 'n' Wear

Textile Transfer Papers

Design your masterpiece, using any art package on any computer then print out your design with any:-
Dot Matrix or Inkjet Printer either in Mono or Colour and iron on to any fabric!! all thats left to do is to wear your very own creation!

only **£8.99** per pack

AUTHORS of PD., Shareware & Licenceware

Here at Warpzone PDL we're always looking for new and innovative titles for inclusion in our library, if you have written something you feel is of good standard then please call us, we will be happy to hear from you

MIXED BAG

MXB-20	Fcopy 3/Disktool + 10 others inc, File Packer, File Reader, Qwikmouse, Desktop Music, 2 Demos, Battlezone Game, Nasa Game, Desktop Cala & more	'D'
MXB-14	Geography/Typewriter + 10 more	'S'
MXB-12	Grammar check/Loan calc + 10	'S'
MXB-10	Diskmech/ST Init + 11 others	'S'
MXB-21	Quark... 30 Sci-Fi stories on disk	'D'
MXB-18	Professional Astrology A truly professional Astrology prog with serious support and upgrade - add on modules. available from its very helpful author	'S'
MXB-16	15 asst'd utils inc. Goodies/Fontrix	'D'
MXB-04	12 asst'd utils inc. Codefind/Arc Inc. Archive prog. Assemhler to GFA STD code finder, Format prog. HD-Utility, Data Salvage & more	'S'
MXB-25	Miscellaneous STOS upgrade (to any ST), Dual-Column printer, Fastprint utility, Spell Checker & Artprint – a way to keep graphic track of your piccy's and Clip Art	'D'

UTILITIES

UTIL-40	Minidraft 2 (+ST CAD + 1 more)	'D'
UTIL-34	Mega Utility (31 asst'd utilities)	'D'
UTIL-06	HD utils/Ramdisk and 12 others	'D'
UTIL-20	Archive Suite (compression progs)	'S'
UTIL-21	Sticker III (best disk labeller)	'D'
UTIL-22	10 progs for printer owners	'S'
UTIL-05	7 suites of various label progs	'S'
UTIL-30	Address hook/V kill/Packer + 12	'D'
UTIL-32	MINT (unix type system)	'D'
UTIL-33	Superboot 7.2 + 7 others	'D'
UTIL-04	Disk cataloger & Labeller + 1 more	'S'
UTIL-06	Formatter/Ramdisk + 12 more	'S'
UTIL-10	Gemini, alternative. Desktop	'S'
UTIL-11	18 asst'd desk accessories	'S'
UTIL-16	17 asst'd desk accessories	'S'
UTIL-24	Disk Douhler/Dual Format +12	'S'
UTIL-27	Sagrotan (Virus killer, very good)	'D'
UTIL-38	Vault (best HD hack-up) + 5 more	'D'
UTIL-02	System 2 (replacement op. sys)	'S'
UTIL-39	Various Archivers & Packers	'D'
UTIL-40	ST CAD II (excellent CAD prog)	'D'
UTIL-41	Spreadsheet/Sector edit + 4 more	'D'

BATH BULLETIN BOARD

The Leading 'ST' BBS IN THE UK

Is proud to be associated with WARPZONE PDL.
1000s of 'ST' files to download,
NO limits to subscribers

Call: 0225 840060 To check out the UKs only MULTILINE Bulletin Board For the 'ST'.
Chat Rooms. E-Mail. Message Base. Downloads.

Joint Subscription to Bath BBS & Warpzone Gold Club

JUST...£15.00

BATH BBS, P.O. BOX 1588, BATH BA1 3TJ

MUSIC

MUS-31	Megarave (extra long Rave track)	'D'
MUS-29	Energy for You (5 Dance tracks)	'D'
MUS-28	Hardcore Dancefloor (NOT STE)	'D'
MUS-21	Hi-Fidelity Dreams As reviewed in March STR. you have just got to hear this! Better on an 'E', Amiga eat your heart out!!!	'D'
MUS-22 to 27	Peeks & Pokes 1 to 6 All these tracks are of the same quality as Hi-Fidelity Dreams (MUS-21)	'D'
MUS-30	Musical Wonder Demo 88 pieces of music some original some Digital tracks & some Sound Chip tunes	'D'

P.D. STARTER PACK

10 Double Sided Disks of Your Choice in a clear plastic library case. An offer that is definitely not to be missed!

£11.99

Fully inclusive of post & packing
★ excludes all free offers ★

EDUCATION

EDU-4	Body Shop, Kid publisher/Story	'D'
EDU-5	Spelling Easy + Alphabet	'D'
EDU-21	Master Time (Analogue & Digital)	'D'
EDU-24	Playtime (6 activities for very young)	'D'
EDU-20	Stargazer (astronomy - 2 programs)	'D'
EDU-19	Rip It Up (learn Highway Code-Demo)	'D'

We also carry the full range of:
SHOESTRING Educational Software

WARPZONES MEGA PACK

A cross-section of our library including: Games, Demo's, DTP, Trackers & Modules, Utilities, Word Pro, Spreadsheet, Desk acc's and much more on 21 PACKED-TO-CAPACITY D/D DISKS!! OVER 14.5 MEGABYTES of software (average 700k per disk!!) 170+ quality programs (& 250+ support files), under 70p per prog

all this for only...£24.99 inc p&p

EXTRA VALUE PACKS

7 Double Sided Disks full of programs, in a clear library case only **£8.99** per pack

MIDI Pack

If MIDI is your thing, then this pack is for you... Over 60 files inc. Sequencers, MIDI Utilities, MIDI format seq files, Librarians, Patch editors & more.

GAMES Pack

47 widely varied games, from the really easy to the frustratingly hard, you're sure to find something to test your mettle in this collection.

EDUCATION Pack

From pre-school (shape/colour recognition) right through to late teens (Highway Code) you will find the learning aids in this collection many and varied.

MUSIC Pack

This pack will have you and your ST making music in no time. Sequencers, Noise Trackers and Modules Musical Trivia + songs just for listening to.

ART Pack

If you have always wanted to create a masterpiece and all that was lacking was the tools then look no further... Art progs and pics galore in this pack!!!!

ADVENTURE Pack

Lose yourself in the realm of myth, magic and mystery with the many and varied text & graphic adventures in this pack.

BUSINESS Pack

Need a Spreadsheet? or a Database? or maybe a Word Processor? In this pack you will find all three and much more.

SOUND Pack

Music just for the pure pleasure of it. That's what this pack is all about. you will be surprised how good your ST sounds. 40 tracks to feed your ears.

UTILITY Pack

Here are no less than 50 utilities for countless weird and wonderful uses. Best used with your ATARI ST/E.

DEMO Pack

A feast for your eyes and ears with over 60 Demos. many doing just what the ATARI is not supposed to be able to do!!!

TAKE any TWO packs

For Only

£14.99

★ Twinpack offer excludes library cases ★

PRICES

£1.50 per D/S disk
£1.00 per S/S disk

Catalogue + 700k of software...£1.00

Catalogue Only:-
Please send Blank Disk & S.A.E.

Unless stated, all prices inc. p&p.
Only one Free Offer per order please
Cheques/P.O.'s to Warpzone PDL

FREE OFFER

Placing an order for more than £7.50 will entitle you to a choice of one or more of the disks in the box on the far right **FREE!**

More than **£7.50**: choose and **1 disk**
More than **£15.00**: choose and **2 disks**
More than **£25.00**: choose and **3 disks**
More than **£35.00**: take all **four disks!**

1) **THREE UP** – 3 of the better games from the world of shareware, NIRVANA, HUNCHY 2010 and BUGGUNT II
2) **PAINTPOT** – Excellent, professional quality Paint/Art Utility
3) **PRINTING PRESS** – & support disk, 2 D/S disks on 1!!!
4) **ALCHEMIE Jnr** – One of the very hest PD. MIDI Sequencer

technical letters • problems • suggestions

ADVICE service

Darren Evans, Advice Service, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP

Falcon questions

I, probably like many other ST owners, am considering buying a Falcon030 but have many questions which need answering. I intend to buy the 1Mb version when it is available and would be grateful if you could answer some queries:

1. Can I use my Protar 50DC hard drive with the Falcon or will I have to fork out for another hard drive?
2. I have a Stereo Master sampling cartridge and wonder if I will be able to take advantage of the Falcon's stereo abilities as is currently the case with my STE?
3. Considering the Falcon has a 1.4Mb high density drive, will I still be able to use standard, 720k disks with it?
4. Just how compatible are games with the Falcon? Can we expect major problems with compatibility?

J Heath, Warrington

Let's get right down to business with these questions shall we? Luckily for you, the Protor 50DC has a standard 50-pin SCSI output port and connecting it to your Falcon will simply require that you obtain a cable which connects the smaller SCSI 2 port of the Falcon to the larger SCSI port on the Protar.

It is doubtful that any cartridge software will work on the Falcon. The dongles that are supplied with Cubase and Nototor are not recognised by it.

Anyhow, you don't need a sampling cartridge for the Falcon. The built-in ADCs and DACs can sample up to CD quality and only require software to use them. Also, although the developer version of the Falcon (the one that looks like an STE) has a cartridge port, do not count on the consumer version having one.

The 1.4Mb drive can will work perfectly with standard 720k disks. However, do not format 1.4Mb HD disks to 720k as they will not be reliable at the lower storage capacity.

When the Falcon arrived in our office, I immediately came up with an excuse for taking it home with me. When I got home, I dived into my games collection and pulled out two games at random.

These were Dungeon Master and Ultimo VI. Both worked perfectly, with Ultimo VI, which is rather slow when moving your character around on a normal ST, being a lot more playable due to the increased speed of the 68030.

There will be some games that don't work but there is a positive side to this. Consider the situation when the STE, with its enhanced sound, colour palette and hardware scrolling, appeared. There was some initial incompatibility with certain games but as time went on, newer games were written to work on both machines.

Unfortunately, because they worked on both machines, the extra features of the STE were ignored because there would essentially have to be two different sets of programs on the disk, one using the STE's hardware to scroll a screen for instance, and the other using slower software routines due to the lack of such hardware in the STFM.

Not only would development costs increase a little but more disks may have been required. So, the only cost effective option was to write games which worked on the most machines.

With the Falcon being a drastically different machine, software developers will probably take advantage of its capabilities immediately.

L-plate manual

Is it me (at the ripe old age of 54) or is the manual provided with the ST not very informative? I am totally new to computers and I was wondering if there are any books for beginners available that can teach me more about how to use my ST.

B Matthews, Edinburgh

There aren't a vast number of books to choose from when it comes to understanding your ST but two of the best are Your Second Manual to the Atari ST, available from ST Club for £7.95, or, The Atari ST Explored by Kumo at £8.95.

ST Club can be reached on 0602 410241 and Kumo are available on 0734 844335.

Differing disks

I have recently upgraded my internal single sided disk drive to a whapping double sided model and also splashed out on an external double sided drive. However, I have a number of single sided disks which I now want to copy onto double sided.

Unfortunately, when I drag the disk A icon onto the disk B icon, I get a message saying that the disks are not the same and it refuses to continue.

The only other way to copy my files to a double sided from a single sided is to drag the files off the single sided by hand. This is more time consuming because there are lots of files on my single sided drive and the window isn't large enough to list them all so that I can drag a box around the lot and drag them to the disk B icon. Is there some way around this problem?

P Allen, Yorkshire

The reason the drag disk A to disk B copy method doesn't work is that this instructs the ST to duplicate the disk rather than duplicate the files. The net effect is that the destination disk must be formatted identically to the source disk.

There is a way around this though. With your destination disk in drive B and your source disk in drive A, double click on the disk B icon to open its window.

Next, drag the disk A icon into disk B's open window and the entire contents of disk A will be copied to disk B without any hassle.

FAT man speaks

Forgive my ignorance but when listening to conversations about drives and files at my local ST computer club, I keep coming across the term FAT. I am a struggling beginner trying to learn all the techno speak which is bandied about at the regular club meetings and if you could tell me what it stands for and what it actually is, maybe I can impress one of the many young ladies who attend.

K Richards, Plymouth

Well Mr Richards, to put it simply, the term FAT

Got a problem?

Are you at the point of taking an axe to your ST? Do you want to pulverise your printer? Well just count to ten, take a deep breath, then jot down the problems you are having, along with a detailed description of your setup.

Include information on the type of ST you have, the TOS version (if known), what peripherals are attached and any extra hardware that lurks inside your computer (accelerators, graphics cards and so on) and I'll do my very best to come up with a solution.

For those who have had problems and overcome them, chances are that someone somewhere is having the same problems and would benefit from your advice. So, get in print and send any tips or suggestions that other users may find helpful.

Send all tips and cries for help to: Darren Evans, Advice Service, Atari ST User, Europa House, Adlington Park, Macclesfield SK10 4NP.

Printer drivers explained

From all the letters I receive about printers, the majority of the problems encountered can be attributed to two, usually combined, reosons. First, the printer in question is second-hand, ond did not come with a manuol. This, more than onything is on immediate problem.

For one thing most printers come with DIP switches which, in general, determine the initial mode which the printer powers up in. Therefore, if the manual isn't available, it's not possible to know how to configure the switches to the appropriate settings.

Then there is the problem of support. If the printer is being used with a wordprocessor program, the correct printer driver (they come with most wordprocessors) must be selected.

Now printer drivers are, in the large, misunderstood by many people, so I hope that the following explonotian cleors things up a little. First, some background.

There are many, many type of printers avoilable – dot matrix, daisywheel, inkjet, loser, bubblejet, electrothermal, electrostatic. Furthermore, these groups may be subdivided. For exomple, dot-motrix printers are available in 8,9,18, 24 or more pins.

A 9-pin dot-matrix printer hos, funnily enough, nine pins on its printer head, which strike an ink ribbon to form on imoge on the poper beneath. Compared to a 24-pin printer head, o 9-pin head will produce larger dots, therefore, a printer head on a 24-pin printer will be able ta move, vertically or horizontally, in smaller increments than o 9-pin. Such aspects determine the overall resalution of the printer.

In o crowded market, printer manufacturers will often endow their model with extro features over thase of its competitors. Features such as different fonts, either built-in or ovoilable os a plug-in cartridge, are one example. Also, text ottributes, such os italics, bold ond underline are common to most printers.

With oll these features offered by the printer, the computer has to send control codes in order to select the various fonts and attributes. In the case of dot matrix, o subset of Epson's escape (ESC) code sequences ore used.

There are some universol escape codes, for example, ESC 4 switches on itolics, but o code to move the printer head o specific amount will be different given the vorious number of pins a heod can have.

Programs such as wordprocessors offer variaus woys of inputting the cantrol codes necessary to change the layout or text attributes of a document. Most tend to occept the commands via keyboard but mouse selection is also used.

Also, these codes are usually embedded in the text and are represented either by a specific chorocter or even by o wysiwyg display, which octuolly shows the font or ottributes in effect, such os bald, on screen.

With the even more ocute diversity of programs, including their equally diverse human progrommers, it is hardly surprising to find thot they oll have different ways of achieving the same thing.

For a hord example, the excellent word-processor program Protext uses an inverse letter b on screen to signify text which is to be output os bold.

If you save the document ond subsequently view the document file using o disk editor, which shows hexadecimal values, you would see that the numeric value for this 'bold on' cade is 05 E2. If you then took it upon yourself, ormed with your faithful disk editor, to investigote the many other documents saved by other wordprocessors, you will inevitably find they ore not the some.

It therefore becomes opporent thot some method is needed for programs to communicate with printers and their mony differences. Hence, the need for a printer driver.

One common misconception is that a printer driver is an active program controlling the printer. This is not so – a printer driver is merely o data file and is best thought of os a translator.

Most quality programs which autput to the printer come with o collection of printer drivers and most progroms ollow the user to specify which driver is to be used.

So, if you find yourself buying o printer, first of oll moke sure the progrom you wish to use it with supparts it. If you are getting a second-hond one, make sure the monuol comes with it too.

As a last resort, check out the public domain libraries for disks which have a collectian of third-party printer drivers far the progrom you ore using, there ore quite o few available.

stonds for File Allocotion Toble ond is o doto structure which represents o mop of oll the disks clusters (o cluster is the smollest unit of storoge used by TOS ond equotes to two sectors, or 1,024 bytes). This mop enobles TOS to know where to look for o specific file.

Try quoting thot to one of the lodies ot the club ond you moy indeed impress her. But be sure not to mention your floppies or things moy get emborrossing.

More disk info

I om fomilior with the vorious components – FATs, boot sector, directory ond so on – but where ore they ploced on o disk?

M Mills, Felixstowe

I soy, there's o sudden interest in disk structures this month. I will ossume thot you ore referring to double sided drives Mr Mills, os single sided drives ore procticolly extinct by now.

Position	Description
Side A, trock 0, sector 1	Boot sector
Side A, trock 0, sector 2-6	FAT 1
Side A, trock 0, sector 7-9	FAT 2
Side B, trock 0, sector 1-2	FAT 2 agoin
Side B, trock 0, sector 3-9	Directory

Trocks 1-79, sides A ond B ore where file doto ore stored.

Desktop capers

I am led to believe thot you con chonge the nome of the troshcon on the Desktop from TRASH to a more British version. How do you go obout this?

A Wilkes, Gwent

All you need is o text editor. Simply lood the DESKTOP.INF file into the editor, seorch for the word TRASH ond reploce it with your own version. Then sove the file ond when you next boot up, hey presto, TRASH hos been troshed.

GDOS mystery

Whot does GDOS do?

E Mosters, Newcostle

Well this is whot I coll o succinct letter. GDOS, Mr Mosters, is on extension to the ST's operoting system which ollows multiple fonts to be used ond olso output to o voriety of output devices. Without GDOS, you ore restricted to the three system fonts thot ore built-in to the ST.

Das Boot

I om leorning to write in ossembly ond hope to create my first demo soon. I would like to know the structure (in byte offsets pleose) of the boot sector so I con creote bootoble disks for my demo.

C McCormick, Dublin

Hope you ore pleosed with our CoverDisk giveowoy of Devpoc 2 Mr McCormick, I'm sure you will find it o great improvement over Devpoc 1 which you mention you ore using. Now here comes thot boot sector info:

Byte	Description
0-1	Baot program bronch instructian
2-7	"Laader" ar farmatter name
8-10	24-bit seriol number
11-12	Sectar size in bytes
13	Cluster size in sectors
14-15	Number of reserved sectars
16	Number af FATs
17-18	Maximum number af directary entries
19-20	Total number of sectars
21	Media descriptar byte (nat used)
22-23	FAT size in sectors
24-25	Number of sectors per track
26-27	Number of sides
28-29	Number af hidden sectars
30-509	Space ovoilable far short baat program
510-511	Executable checksum flog

Missed a great opportunity?

Are you using one of our recent CoverDisks and wish you'd taken up an offer that went with it? Well, here's another chance to make the most out of your free programs

Upgrade to PFM Plus for only £15.95

For this superb price you con hove oll these improved features:

- Multiple occounts with outo tronsfer
- Trend plotting grophs
- Increased budget hondling
- Full printer report formotting
- Desktop colculotor
- Extensive user-configuroble options

PFM Plus uses Workbench windows, not GEM

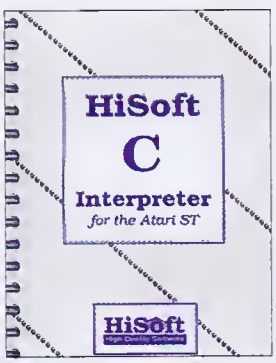
Buy the PFM manual for only £4.95

You con moke the most of the PFM CoverDisk with this excellent monuol thot will enoble you to use the more odvonced money monogement feotures.

Stereo Master sound sampler cartridge

Only £15.95

If you've got the March Stereo Moster CoverDisk, the Mostersound cortridge ond occomponying monuol will enoble you to copture real life sounds from record, tape, CD or o microphone with eose. You con try out one of the Amigo's most popolor home uses – ond sove £25!



The complete HiSoft C package

Only £21.95

This includes o superbly written, ring-bound, 350-poge monuol covering oll feotures of the C Interpreter Editor, os well os tutoriol sections ond full reference poges for oll functions. The purchose of this pockoge olso entitles you to free technicol support from HiSoft.

Upgrade to Lattice C v5.52

Only £99 – save £50

This extremely versotile ond powerful development system for C con be used eosily by both experts ond novices. The Lottice C pockoge includes on excellent monuol, on instollotion guide for easy setting up on vori-ous system configurotions ond seven double-sided disks in o quolity disk wollet. It is excellent volue ot only £99 instead of its normol retoil price of £149.

PFM and Stereo Master

Fill in this form and send it to Microdeal Ltd, PO Box 68, 5T Austell PL25 4YB or phone on 0726 68020

Please send me...

- ☐ Upgrade to PFM Plus for £15.95
- ☐ PFM manual for £4.95
- ☐ Stereo Master sound sampler cartridge and manual.....£15.95

I wish to pay by...

- ☐ Cheque / postal order payable to Microdeal Ltd
- ☐ Credit card ☐☐/☐☐ Expiry Date

Card No ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Name.....

Address.....

.....

Postcode..... Daytime phone .....

All prices include VAT and postage and packing. Allow 28 days for delivery

☐ Tick this box if you do not wish to receive promotional material from other companies

HiSoft C/ Lattice C

Fill in this form and send it to HiSoft, The Old School, Greenfield, Bedford MK45 5DE, or phone 0525 718181, quoting reference number 5THB2 / Q9

Please send me...

- ☐ The complete C package.....£21.95
- ☐ Upgrade to Lattice c v5.52.....£99

I wish to pay by...

- ☐ Cheque / postal order payable to HiSoft
- ☐ Credit card ☐☐/☐☐ Expiry Date

Card No ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Name .....

Address .....

.....

Postcode ..... Daytime phone .....

All prices include VAT and postage and packing. Allow 28 days for delivery

☐ Tick this box if you do not wish to receive promotional material from other companies

The digital solution

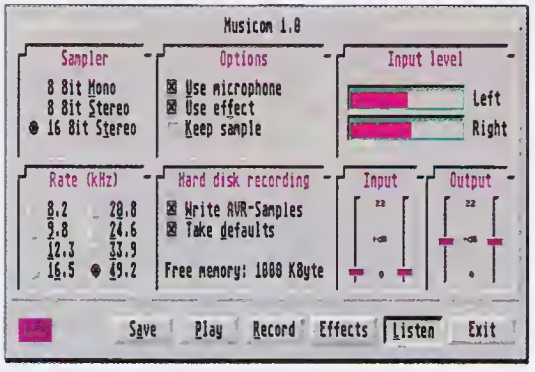
Analogue recording gets another nail in the coffin, as an affordable 16-bit direct-to-disk system arrives for the Falcon. Ofir Gal reports

The release af the Falcon has been surrounded by much talk of its audio capabilities and the vast number of applications far its on-baard DSP chip.

Indeed, the DSP can be used to generate sound effects like reverb and echa in real-time. When used with a hard disk, it is passible to record, or sample sound direct-to-disk.

This opens many apportunities for recarding studias and musicians who previously could nat afford a digital recording system.

Compo, a company renawned far high quolity products like That's Write and Write On, did not have profes-sional musicians in mind when they develaped Musicam. Instead, they created a music pragram far everyane – digital recording and sound processing for less than £50!



The main page – all main functions are only a button or a key press away

GETTING STARTED

The moin screen is a colourful dialogue where oll the major options can be accessed. Musicom is already set to use the best possible settings as far as sound quolity goes, so getting started is simply a case of plug-ging in your CD player or personal stereo.

There are various options enabling selection of sompling rate and file formats as well as access to the most exciting feature af Musicom – the digital effects section.

Just like an ordinory cossette recarder, input levels must be adjusted to obtain optimum saund quality. This is done by pressing the Listen button and adjusting the sliders on the bottom right corner of the dialogue box.

A stereo level indicator is available to help you judge the sound level. The Falcon's built-in speaker can be used to manitar the music, but much better results con be obtained by plugging in a pair af headphones or by connecting the audia autput of the Falcon to a hi-fi system. Any distartion resulting fram too high level settings can be heard before recording. The effect of changing the sampling rate, far example, can be heard instantly without having ta record the music first.

LARGE FILES

Pressing the Record button opens the file selectar where you can name the sample file. Audia sample files can be alarmingly large – a ten-second stereo sample at the maximum sampling rate of 49.2kHz requires 2Mb af disk space which must be on a single partition. Needless to say, a hard disk ar a very large RAM disk is required; a floppy will just be taa slaw anyway. Fallowing that, a small dialogue box appears and clicking the left mouse buttan starts recarding.

This will continue until yau press the right button or no more disk space is available. Playback works in a similar way and the sound quality is truly astounding – it simply has to be heard to be believed.

Karaoke is going to be a very papu-lar feature of Musicom. Using some clever digital signal processing trickery, vacals can be almost totally removed from existing recordings.

This only warks on sterea material, especially when the vocal is panned to the middle and mast instruments are panned left and right.

The process is not automatic and requires the user to adjust two sliders which can be a little tricky at first. After a little practice, I managed to consider-ably reduce the level of a lead vocal track.

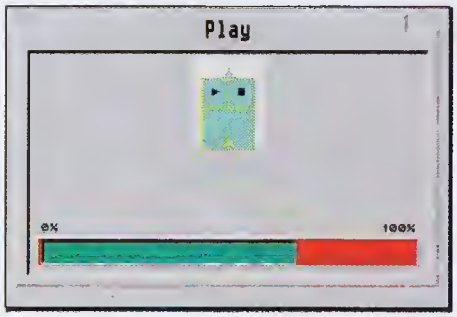
Unlike the manual claims, the Karaake made affects the overall sound of the music. After all, completely removing any part of the music is impossible. You can then plug in a microphane and sing aver the music.

FRIENDLY INTERFACE

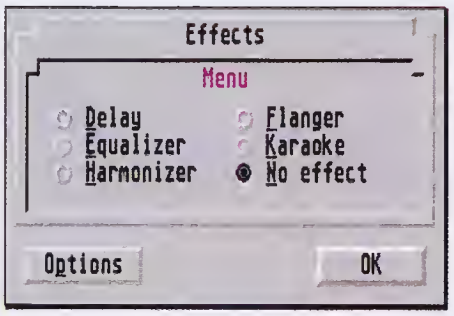
Musicam is a nice little program that utilises the new feotures af the Falcon rather well. It alsa pravides users with a friendly user interface – simple dialogue boxes, keybaard short-cuts and on-line help. It is also very stable and did not cash even once during the review period.

The manual is quite good but the English translation from German be better. It daes explain rather well and in simple terms what sampling is and how each effect warks.

Same af the effects like the flanger could benefit from a few mare parame-ters ta play with and digital reverb should have been included. Next update perhaps?



The fuel gauge shows playback progress. The left button starts play-back and the right button stops it



A selection of digital sound effects are available both when recording and on playback

BOTTOM LINE

FEATURES
To be commended tor its effective use of the Falcon's special features – not to mention the exciting digital effects.

Excellent
Good
Average
Bad
Appalling

EASE OF USE
A badly translated manual does little to detract from the clear way the pro-grammers have thought this package through.

Excellent
Good
Average
Bad
Appalling

VALUE FOR MONEY
Digital recording direct to disk tor just £50... now that's what I call value!

Excellent
Good
Average
Bad
Appalling

Product: Musicom
Supplier: Compo Software, 7 Vinegar Hill, Alconbury, Weston, Huntingdon PE17 5JA
Telephone: 0480 891819
Price: £49.95
Configuration: All STs and TT

Best both

Finding it hard to decide whether you need a vector or a bitmap graphics program? Andrew Wright looks at Arabesque, a new package that offers both

Until naw, the anly choice for thase wanting bitmap and vectar graphic capabilities in a single program has been Megapaint Prafessional. There is gaad reason far cambining the two – you only have to leorn one interfoce and you dan't need to exit ond relood if you want to creote different types of grophics at one go.

Megapaint, however, stops short of being oble to combine both types of ort in o single file – it is o progrom with two distinct modes and no sign of an outotracer to help bridge the gap.

Arobesque Professionol, on the other hand, introduces a new graphics format colled AOB. Though primarily a vector format, bitmop images can be included as objects, olthough only mono images are supported at present.

Arabesque isn't new – I wos given on eorly version at a show in 1991 – though it hosn't been distributed and supported in the UK until now.

It is still being developed further, however, ond the manuol promises true colour support, multiple windows and advanced font hondling in o future releose, presumably in o Folcon-campotible version.

Well-behaved program – memory options in Arabesque

The toolbox in bitmap mode showing a range of compsite tools

TIME-SAVERS

The manuol is o comprehensive 171 pages of A5 in o smart ring binder with o matching box. It is well laid aut with effective index and contents pages. There is olso a list of keyboard shortcuts at the back to save you wading through the bulk of the monuol itself. It's surprising how many progroms don't include these rather obvious oids.

Up ond running, Arabesque disploys on unusual interfoce. The drowing area is a window with horizontol ond verticol scroll bars ond a status line along the top with cursor position ond page size.

It isn't a GEM window though, and it con't be resized. As there's no menu bor, you con't access desk accessories except via the toolbox icon.

There is no GEM menu bor either, only a flooting toolbox accessed by clicking the right mouse button. It pops up wherever the pointer hoppens to be, which is a neat touch.

The toolbox is also much the same whether you're in bitmap or vector mode, which can be confusing ot times, ond some of the icons take a little time to get accustomed to. Another nice feoture is the custom file selector that lets you erose, rename, move, and copy files and farmat disks. It's almost os good as the others like UIS, so the fact thot you can't use your normal replacement file selector shouldn't be a problem.

There is also an extensive list of keyboord shortcuts for those who prefer them ond a novel focility for choosing the exact size of the poge to match your printer's resolution.

All the drowing tools ore occessed by clicking the left button, but clicking the right button brings up related dialogues. For instance, left clicking on the draw circle taal, in either mode, results in a dialogue box thot offers options for line width, ending (three types, including arrowhead), style, fill pottern, and drawing mode, including reploce, transporent, XOR or inverted.

This holds far both bitmap and vector modes and the two ore so similar it's often eosy to forget which mode you're working in.

Drowing aids are confined to a user-definoble grid but there are no help lines os in Didot Lineort, which is a pity as they are extremely useful taols for aligning objects and constructing regulor shopes. In bitmap or paint mode there is o wide ronge of composite tools, including squores, rectongles, rounded rectangles, avals, palygans and triangles.

There ore two different types of smoothed curve, ellipticol orcs and stondord Beziers. In the preferences menu you con select 3D mode which lets you odd on opparent third dimension to polygons, squares ond triangles.

There is o much wider range of fills than ony other art pockage I've come ocross. There are three fill palettes of 36 fills, the first being the stondard GEM selection and the other two represent various shades of grey.

The second provides a range of greys from around five to 95 per cent, while the third palette cantoins similor shodes made up of much coarser dots, almost like halftones.

BLOCK TOOLS

Arabesque's black buffer is a powerful tool for messing around with images and creating some rother good speciol effects. It works in o similor way to the block function in Degas Elite – once a black is selected, it can be distorted, resized, skewed, rototed or otherwise manipulated.

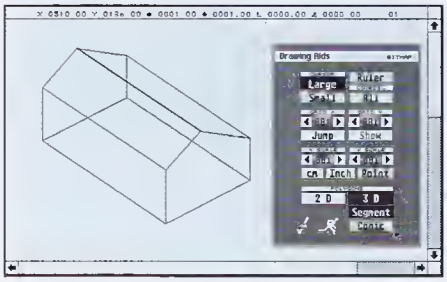
More unusuol feotures include smoothing to eliminate jaggies, contouring, patterning, bending and pulling (just like adding perspective).

Arobesque can handle only bitmop fonts (three are supplied) which is something of a disoppointment. Nonetheless it can utilise high quolity Signum format fonts or stondord GDOS ones, though only five can be used at a time, or six if you include the system font.

A seporate utility is provided ta convert Signum fants into the carrect formot.

Perhops the most exciting facility is the gradient and imoge fill function. Any shape, regular or freehond, con be

Some of the block functions that are available at the press of a button



Three dimensional objects can be drawn very quickly in bitmap mode

Getting started

The first surprise is that Arabesque comes on o single disk. There's plenty crammed onto it though, including severol GDOS fonts, printer drivers ond somple files. Installation can be corried out manually, by copying the required files across, or via a custom installation progrom that does it for you.

The instollation is a little unhelpful. For exomple, it displays printer driver options one at o time so you have to make a decision there ond then rather than gloncing through o list to find o match.

Hoppily, the program runs just os well instolled on floppy drive-based systems as on o hard drive. It only requires a 1Mb mochine to run on but you will need o mono monitor.

This restricts the morket slightly but mokes it ideal for the serious home user as well os others looking for a DTP odd-on or on oll-in-one illustration packoge.

You con configure Arabesque to use oll or some of your avoilable RAM, storing up to 20 bitmop pages or six vector ones in memory ot one time. This is particulorly useful if you're running desk occessories, on Atori loser or perhaps even other progroms in the background under one of the multitasking versions of TOS.

# of worlds?

The text handling is about good enough for illustrative work – but only just

filled not only with a pattern, but with a gradient fill or even another image.

Gradient fills are "washes" of grey that change shade gradually from one end of the filled object to the other. In Arabesque they can be horizontal or vertical gradients in either direction. Holding down the Control key even praduces radial gradients!

Magnification is restricted to 2, 4 or 16 times although page views are possible too. Other features include o sproycan with up three combinotions each of speed and size, a paintbrush with up to 24 different brush patterns (you can create your own too), a pencil, eraser and lasso function. There's also a limited undo feature for mistakes.

Apart from Arabesque's own ABM bitmap format, it can import and export GEM IMG, Degas, IFF (mono only) and NEO plus STAD and Art Director files. The lack of TIFF or GIF support isn't critical as Arabesque works in mono, but it would still be useful.

In vector or object-oriented graphics mode, much the same tools ore available although they work in a slightly different woy.

All the familiar composite tools such as squares, circles and lines are there, plus editable Bezier curves. There are also Bezier polygons with different precision settings. Despite this, the vector mode has less exotic features than the bitmap mode. It is pretty standard fare, when compared to the likes of DA's Vector or Didot Lineart, although it does offer all the facilities that most users are likely to need.

Text handling is better than in bitmap mode, with text in separate frames able to be edited after being placed on the page. Again GDOS or Signum fonts (once converted) can be used and three are actually provided. There are more magnification levels too, including 2, 4 8 and 16 times.

Once objects have been created they can be rotated in 90 degree steps, turned in one degree increments, flipped or mirrored.

Search and replace is a powerful feature in wordprocessing and DTP but it also has its use in graphics. If you suddenly decide that all them of a certain type are printing too dark, you can search and replace these fills with a lighter one, searching through an entire graphic or just a selection of objects.

POWER-PACKED

Unfortunately there is no icon – you have to remember to hold down Control, press Help ond then follow the onscreen instructions – ond there's no online help to remind you.

One very odd feature is the obility to convert vector graphics to bitmaps! Odd indeed.

In vector mode, Arobesque can load ond save in GEM/3 or Calamus CVG formots as well as its own proprietary AOB one. The former option is a little too advanced for its own good as many ST packages like PageStream and Timeworks have problems with this revision of the GEM object format.

In overall terms Arabesque is a very classy product at a competitive price. Some of the tools, such as the 3D polygons ond fills, ore extremely powerful.

Didot Lineart and DA's Vector both have better vector graphics feotures, including autotracing, but they can't create bitmap images. Megapaint Professional costs an awful lot more and lacks some of Arabesque's more exotic features like gradient and block image fills.

I do have some reservations about the interface, though. Personally I like the GEM interface – it's what the ST is all about. Every time someone comes up with a clever alternative it only means a new set of commands to be learned and a different way of working.

Most programs can combine a GEM menu bar with a separate toolbox on the side quite successfully (look at PageStream and Hyperpaint, for example). With Arabesque you have to use the floating toolbox or nothing – there's no menu bar and no online help if you get stuck.

Although the program is undeniably fast – thanks to it bypassing the GEM screen draw routines – it isn't particularly easy to use and the reliance on a crowded and rather obtuse toolbox makes it very hard to get to know.

It's only an opinion though, and if you like the sound of it, there's a demo avoilable from the ST Club on disk DEM47. I suggest you try before you buy – if you con master the interface, you'll be hard pushed to find o graphics package that will do as much os Arabesque.

BOTTOM LINE

FEATURES

Wide range of features and integrates vector and bitmap formats very neatly.

Excellent
Good
Average
Bad
Appalling

EASE OF USE

The interface is awkward and there's no help in sight, though the manual is fine.

Excellent
Good
Average
Bad
Appalling

VALUE FOR MONEY

Good value for a combined vector and bitmap package.

Excellent
Good
Average
Bad
Appalling

Product: Arabesque Professional v2.15
Supplier: HiSoft, The Old School, Greenfield, Bedford MK45 5DE
Telephone: 0525 718181
Price: £149
Configuration: All ST/STE models with 1Mb and mono monitor

Eagle Software

FREE MYSTERY GAME WITH ORDERS OVER £50

118a Palmers Road
New Southgate
LONDON N11 1SL

CREDIT CARD HOTLINE:
081 889 9172
ENQUIRY/ORDER LINE:
081 361 5730
24 HOUR FAX LINE
081 361 2733

BITMAP BROTHERS VOL 1 only £16.99
Xenon, Cadaver and Speedball II

DREAM TEAM only £16.99
Terminator II, Simpsons, W.W.F.

RAVING MAD only £18.99
Mega twins, Rodland, Robocod

CHAMPIONS only £13.99
Jahangir Khan Squash, Man United and W.C. Boxing Manager

SOCCER MANIA only £9.99
Football Manager II, Gazza's Soccer, Football Manager - W.C. Edition, Microprose Soccer

POWER PACK II only £17.99
Predator II, Battle Master, Wings, It Came From The Desert.

BIG BOX only £15.99
Captain Blood, Tin Tin on the Moon, Safari Guns, Teenage Queen, Bubble Plus, Purple Saturn Days, Krypton Egg, Jumping Jackson, BoBo, Hostages

EAGLE BLASTERS
Not STE compatible only £11.99
Blasteroids, Conflict, Grimblood, Hunter Killer and Little Computer People

BIG BOX II only £19.99
Back to the Future III, R-Type, IK+, Real Ghostbusters, Def of the Earth, TV Sports Football, Shanghai, Arkanyte, Sinbad, Bomboozal

FLIGHT COMMAND only £14.99
Eliminator, Strike Force Harrier, Lancaster, Sky Fox and Sky Chase

4 WHEEL DRIVE only £19.99
Lotus Esprit, Celica GT4 Rally, Team Suzuki, and Combo Racer

POWER PACK only £14.99
Xenon 2, TV Sports Football, Bloodwych and Lombard Rally

HOLLYWOOD COLLECTION only £18.99
RoboCop, Ghostbusters 2, Indiana Jones, Batman the Movie

RAINBOW COLLECTION only £13.99
New Zealand Story, Bubble Bobble, Rainbow Islands

GRANDSTAND only £11.99
Gazza Super Soccer, Pro Tennis Tour, World Class Leaderboard and Continental Circus

MAX EXTRA only £17.99
Turrican II, ST Dragon, SWIV and Night Shift

NINJA COLLECTION only £10.99
D. Dragon, Shadow Warrior, D. Ninja

BITMAP BROS VOL 2 * only £16.99
Xenon II, Gods, Magic Pockets

SUPER HEROES only £10.99
Strider II, Indiana Jones, Last Ninja II and Spy who loved me

AWARD WINNERS ONLY £16.99
Kick Off II, Pipemania, Space Ace and Populous

2 HOT 2 HANDLE only £18.99
Golden Axe, Total Recall, Shadow Warrior, Super Off Road Racing

STRATEGY MASTER only £21.99
Deuteros, Populous, Hunter, Chessplayer 2150 and Spirits of Excalibur

SUPER FIGHTER only £16.99
Pitfighter, W.W.F., Final Fight

THE GREATEST only £19.99
J.W.Whirlwind Snooker, Lure of the Temptress and Shuttle

DIZZYS EXCELLENT ADVENTURES only £16.99
Dizzy Panic, Bubble Dizzy, Dizzy Prince of Yolk Folk, Spellbound Dizzy and Kwik Snak

ACTION MASTERS only £10.99
Turbo Outrun, F16 Combat Pilot, Italy 1990, Welltris and Double Dragon II

SPORTS COLLECTION only £12.99
Run the Gauntlet, Pro Tennis Tour and World Cup Soccer (Italia '90)

FOOTBALL CRAZY only £14.99
Kick Off II, Player Manager and K.O.II Final Whistle

QUEST AND GLORY only £16.99
Cadaver, Bloodwych, Iron Lord and Midwinter

ACTION 5 only £19.99
Rick Dangerous II, Ghostbusters II, Gunship, Super Ski and Hard Driving

TOP TITLES	ST
3D Construction Kit	£12.99
3D Construction Kit II	£36.99
Action Stations	£12.99
Addams Family	£16.99
Agony	£15.99
Airbus	£25.99
Air Combat Patrol	£19.99
Air Support	£15.99
Aliens III *	£16.99
A.Maclean's Pool	£16.99
Amberstar *	£16.99
AMNIOS	£15.99
Ancient Art of War in Skies*	£23.99
Another World	£17.99
Aquatic Games star J Pond	£16.99
Arabian Nights *	£16.99
Armourgeddon	£15.99
Armourgeddon Upgrade *	£10.99
A.T.A.C. *	£23.99
A-Train *	£17.99
B17 Flying Fortress *	£23.99
BARBARIAN II (Psyg)	£12.99
Bart vs The World *	£16.99
B.A.T. II	£22.99
Battle Command	£10.99
Battle Isle	£16.99
Battle Toads	£16.99
BC Kid	£16.99
Body Blows	£16.99
Buck Rogers	£19.99
Caesar	£16.99
Cadaver	£16.99
Cadaver - the pay off	£10.99
California Games II	£7.99
Campaign	£22.99
Captive	£15.99
Captive II *	£17.99
Carl Lewis Challenge	£15.99
Castles	£16.99
Castles Data Disc	£11.99
Chaos Engine	£16.99
Chase HQ II	£14.99
Chuck Rock II *	£16.99
Civilisation	£23.99
C.Y's Air Combat	£20.99
Cool Croc Twins	£16.99
Cool World	£16.99
Combat Air Patrol	£16.99
Covert Action	£23.99
Crazy Cars III	£16.99
Cruise for a Corpse	£17.99
Crystal Kingdom Dizzy	£13.99
Curse of the Azure Bonds	£12.99
Cytron	£19.99
Dalek Attack	£12.99
Darkmere	£16.99
Deliverance	£15.99
D/Generation	£11.99
Disciples of Steel	£17.99
Doodlebug	£16.99
Double Dragon III	£16.99
Dreadnoughts	£22.99
Dreadnoughts Bismark	£11.99
Dreadnoughts Ironclad	£11.99
Duck Tales Quest for Gold	£15.99
Dune *	£19.99
Dune II *	£19.99
Dungeon / Chaos	£19.99
Dyna Blast	£20.99
Elf	£12.99

TOP TITLES	ST
Elvira Mistress Dark	£21.99
Elvira II - Cerberus	£23.99
Epic	£19.99
F14 Tom Cat *	£16.99
F15 Strike Eagle II	£23.99
F117A Stealth Fighter *	£21.99
F19 Stealth Fighter	£12.99
F29 Retaliator	£15.99
F.A.Premier Lgue Football *	£16.99
Face Off - Ice Hockey	£15.99
Falcon	£11.99
Falcon Mission Disk I	£8.99
Falcon Mission Disk II	£8.99
Falcon 3.0 *	£23.99
Fantastic Voyage	£16.99
Fate of Atlantis (Arc)	£16.99
Final Blow	£16.99
Final Fight	£16.99
Fire and Ice	£15.99
First Samurai	£7.99
First Samu/MegaLoMan	£20.99
Flashback *	£16.99
Flight of the Intruder	£11.99
Football Manager III	£14.99
Future Wars	£8.99
Gauntlet III	£16.99
Getysburg	£15.99
Global Effect	£16.99
Goblins II	£19.99
Gods	£16.99
Golden Shot	£16.99
G. Gooch Cricket	£21.99
Graham Taylor	£15.99
Grand Prix (Formula)	£23.99
Gunship 2000 *	£23.99
Guy Spy	£17.99
Harlequin	£16.99
Harrier Assault AV8B	£23.99
Heimdall	£19.99
Hero's Quest (Grem)	£16.99
Hill Street Blues	£15.99
Historyline 1914-18 *	£16.99
Hook	£15.99
I. Bothams Cricket	£19.99
Indy Heat	£14.99
International Sports Chall.	£15.99
Ishar - Legend Fortress	£20.99
Jaguar XJ220	£16.99
James Pond III (Op Starfish)	£16.99
Jim Power *	£16.99
J. White's Whirlwind	£19.99
J. Barnes (1 Meg)	£15.99
KGB	£20.99
Kick Off II (1 Meg)	£10.99
Kick Off III*	£16.99
Kid Gloves II	£16.99
KILLING GAME SHOW	£15.99
Knight Mare + Hint Book	£19.99
Knight of the Sky	£23.99
Krusky's S.Funhouse	£16.99
Lawn Mower Man *	£16.99
Leander	£15.99
Leathal Weapon	£16.99
Leeds Utd	£16.99
Legend	£11.99
Legends of Valour	£26.99
Leisure Suit Larry III	£20.99
Lemmings	£15.99
Lemmings and Data Disk	£19.99
Lemmings II	£19.99

TOP TITLES	ST
Lemmings - Data Disk	£13.99
Lemmings - Stand Alone	£15.99
Liquid Kids *	£16.99
Little Devil *	£17.99
Lost Patrol	£15.99
Lotus Turbo Challenge II	£8.99
Lotus Turbo Challenge III	£16.99
Lure of the Temptress	£19.99
M1 Tank Platoon	£9.99
Magic Pockets	£15.99
Man Utd. Europe	£15.99
M. Ditka Ultimate Football *	£16.99
Mega Fortress	£19.99
Mega Sports	£16.99
Megatraveller II	£20.99
Metal Masters	£10.99
Merchant Colony	£16.99
Microprose Golf	£23.99
Midwinter II	£23.99
Mig 29 Fulcrum	£16.99
Monkey Island	£15.99
Myth	£16.99
Nam 1965-75	£12.99
N. Mansell World Champ	£20.99
Nick Faldos Golf	£23.99
Operation Stealth	£9.99
O.Sharif Bridge	£20.99
OBITUS	£10.99
Ork	£15.99
Outlander	£16.99
Pacific Islands - T.Yankee II	£20.99
Pacific Islands Mission Disc *	£14.99
Pacific Islands II *	£20.99
Paperboy II	£16.99
Parasol Stars	£15.99
Plan 9 From Outer Space	£8.99
Populous + Promised Lands	£9.99
Populous II - The Challenge	£11.99
Populous II (1 Meg)	£20.99
Populous II (Half Meg)	£20.99
Premier Manager	£16.99
Pro Flight	£30.99
Project X	£16.99
Push Over	£15.99
Putty	£16.99
Ragnorok *	£16.99
Railroad Tycoon	£23.99
Rampart	£16.99
Reach for the Skies	£20.99
Red Zone	£15.99
Risky Woods	£16.99
Road Rash	£16.99
Robin Hood	£16.99
Robocod	£7.99
Robocop III	£16.99
Rod Land	£16.99
Rookies *	£17.99
R-Type II	£14.99
Sabre Team	£16.99
Secret Weap Luft *	£19.99
Sensible Soccer 92-93	£16.99
Shadowlands	£20.99
SHADOW BEAST II	£12.99
Shadow Worlds	£16.99
Shoot em up Con. Kit	£7.99
Shuttle the Sim	£20.99
Silent Service II	£23.99
Sim Earth	£23.99
Simpsons	£6.99
Sleepwalker	£20.99

TOP TITLES	ST
Snow Bros	£16.99
Soccer Kid *	£16.99
Space 1889	£20.99
Space Gun	£12.99
Space Crusade	£16.99
Special Forces	£23.99
Steel Empire	£20.99
Stereo Master	£26.99
Storm Master	£16.99
Street Fighter II	£17.99
Strike Fleet	£9.99
Striker	£16.99
Soup Trek *	£16.99
Super Space Invaders	£15.99
Super SWIV *	£16.99
Supremacy	£16.99
Tennis Cup 2	£16.99
The Games '92 Espana	£20.99
Their Finest Hour	£19.99
The Manager	£20.99
ThunderhawkAH-73M	£21.99
Thunder Jaws	£16.99
Tip Off	£16.99
Toki	£15.99
Toonworld *	£16.99
Troddlers *	£16.99
Trolls	£16.99
Twilight 2000	£23.99
Ultima Martian Dreams *	£20.99
Ultima V	£19.99
Ultima VI	£20.99

TOP TITLES	ST
UMS II	£23.99
UMS II Planet Editor *	£20.99
Universal Monsters	£16.99
Utopia	£16.99
Utopia New World	£11.99
Video Kid	£15.99
Viking Fields of Conquest	£15.99
Volfied	£16.99
Vroom	£16.99
Walker	£16.99
War Zone (Core Design)	£12.99
White Death (1 Meg)	£12.99
Wild Wheels	£14.99
Wiz Kid	£15.99
W.W.F.	£6.99
W.W.F. II	£15.99

3.5 DS DD discs
with Labels boxed in 10's

10 x 3.5	DS	DD	£5.99
20 x 3.5	DS	DD	£11.99
30 x 3.5	DS	DD	£15.99
50 x 3.5	DS	DD	£21.99
100 x 3.5	DS	DD	£39.99

Please add 50p per 10 discs when ordering to cover P & P

Also available:
DS HD disks please phone for prices

EDUCATIONAL	
ADI English 11-12	£16.99
ADI English 12-13	£16.99
ADI English 13-14	£16.99
ADI French11-12	£16.99
ADI French 12-13	£16.99
ADI French 13-14	£16.99
ADI Maths11-12	£16.99
ADI Maths 12-13	£16.99
ADI Maths 13-14	£16.99
Better Spelling 8-14	£14.99
Better Maths 12-16	£14.99
Paint and Create	£16.99
Spelling Fair	£16.99
Merlins Maths	£16.99
Fun School 3 under 5	£16.99
Fun School 3 5-7	£16.99
Fun School 3 7+	£16.99
Fun School 4 under 5	£16.99
Fun School 4 5-7	£16.99
Fun School 4 7+	£16.99
Junior Typist	£11.99
Magic Maths (4-8)	£14.99
Maths Mania	£14.99
Noddy's Playtime	£16.99
The Three Bears	£14.99

SPECIAL OFFER
BUY 5 budget titles and get the 6th one FREE!

ST BUDGET TITLES UNDER £10

3D Pool	£6.99
Afterburner	£6.99
Altered Beast	£6.99
Arkanoid II	£6.99
ATOMINO	£5.99
Barbarian	£5.99
Barbarian II	£6.99
Batman The Movie	£6.99
Battlehawks 1942	£9.99
Blood Money	£6.99
Cabal	£6.99
California Games	£6.99
Carrier Command	£8.99
Celica GT4 Rally	£6.99
Centrefold Squares	£6.99
Chase HQ	£6.99
Cloud Kingdom	£6.99
Colossus Chess	£6.99
Combo Racer	£6.99
Conflict in Europe	£7.99
Continental Circus	£5.99
Deluxe Strip Poker	£6.99
Double Dragon I or II	£6.99
Dragon Ninja	£6.99
Duel	£8.99
Fantasy World Dizzy	£5.99
F16 Combat Pilot	£7.99
F.O.F.T.	£6.99
Gauntlet II	£6.99
Ghostbusters II	£6.99
Ghouls'n'Ghosts	£6.99
Golden Axe	£6.99
Head over Heels	£6.99
H. H. Guide to Galaxy	£7.99
Hudson Hawk	£6.99
Hunter Killer	£2.99

IK+	£6.99
Impossible Mission II	£6.99
Indy Last Crusade Graphic	£9.99
James Pond	£6.99
J.Khan Squash	£6.99
Kid Gloves	£5.99
Last Ninja II	£6.99
Last Ninja III	£7.99
Little Computer People	£2.99
Lombard RAC Rally	£6.99
Lotus Esprit	£6.99
M. Jackson Moonwalker	£6.99
Midnight Resistance	£6.99
Midwinter	£9.99
Moonshine Racers	£6.99
Mouse (Switchable)	£9.99
Murder	£7.99
Narc	£6.99
Navy Seals	£9.99
New Zealand Story	£6.99
Ninja Remix	£7.99
North & South	£6.99
Out Run	£6.99
Operation Stealth	£9.99
Operation Thunderbolt	£6.99
Operation Wolf	£6.99
Outrun Europa	£7.99
Pang	£6.99
Panza Kick boxing	£8.99
Pinball Magic	£7.99
Pitfighter	£6.99
Platoon	£5.99
Plotting	£6.99
Predator	£6.99
Predator II	£9.99
Prince of Persia	£6.99

Pro Tennis Tour	£6.99
Puzznic	£6.99
Rainbow Islands	£6.99
Rambo III	£6.99
RBI2 Baseball	£6.99
Resolution 101	£6.99
Rick Dangerous II	£7.99
Robocop	£6.99
Robocop II	£6.99
Rolling Ronny	£9.99
R-Type	£6.99
Run The Gauntlet	£6.99
R.V.F. Honda	£6.99
Shadow of the Beast	£6.99
Shadow Warrior	£6.99
Sherman M4	£6.99
Shinobi	£6.99
Smash TV	£6.99
Starglider II	£6.99
Stunt Car Racer	£6.99
Supaplex	£6.99
Super Cars II	£8.99
Super Off Road	£6.99
Super Hang On	£6.99
SwitchBlade	£6.99
Switch Blade II	£8.99
Swiv	£6.99
Teenage Mutant Turtles	£6.99
Terminator II	£6.99
Thunderstrike	£6.99
Toobin'	£6.99
Turrican II	£7.99
Untouchables	£6.99
Vigilante	£6.99
WC Leaderboard	£6.99
World Championship Boxing	£6.99
Zak McKracken	£8.99
Xenon II	£7.99

VISIT OUR SHOP
AT
120a MYDDLETON ROAD
WOOD GREEN
LONDON
N22 4NQ.
081 889 9172
SHOP PRICES MAY VARY.

Please make cheques and P.O.'s payable to ***Eagle Software***. P&P is £1.00 per item in the UK. Orders under £10 please add 50p per item. Europe: add £3.50 per item. Elsewhere add £5.50 per item. New titles will be sent as released and are subject to manufacturers price reviews. E.&O.E. SPECIAL OFFER APPLIES ONLY IF QUOTED WHEN ORDERING.

Computer ATARI ST Date

Title Price

Price

Price

Price

P & P

Total

161 *Not released at time of going to press

VISA Access

Name:

Address:

Postcode: Tel:

Card No:

Exp Date Member No:

Access ☐ Visa ☐ Cheque ☐ P.O's ☐

Free Membership with First Order. No obligation to re-order.

Here we go, here we go, it's...

GAMER

CHAMPIONSHIP MANAGER '93

DOMARK GO TO THE TOP OF THE LEAGUE

REVIEWS... Graham Gooch World Class Cricket
Action Sport ● International Rugby Challenge and more...

ALSO... ECTS Games News 3 page special ● Budget mania in Cheap Seats
Golden oldies in Blast From the Past ● Sabre Team Cheat Mode

ATARI ST SOFTWARE & ATARI LYNX 2

SPECIAL RESERVE TOP TEN ATARI ST GAMES OF FEBRUARY/MARCH 1993

MONKEY ISLAND
13.49

STREETFIGHTER 2
18.49

PREMIER MGR
13.49

SENSIBLE SOCCER
16.99

3D GOLF
13.99

LEMMINGS
12.49

FORMULA 1 GP
14.99

LEMMINGS 2
19.99

BATTLE OF BRITAIN
13.99

ISHAR
10.49

SABRE TEAM
11.49

KNIGHTS OF THE SKY
13.99

VROOM
12.99

SPECIAL FORCES
13.99

ROBOCOP 3
11.49

CHAMPIONSHIP MGR
12.99

LOTUS 3
13.49

HOOK
11.99

PICK'N'PILE
3.99

AIR SEA SUPREMACY
13.49

FIRST SAM/MEGA
13.49

ADDAMS FAMILY
11.49

QUEST & GLORY
13.99

JIMMY WHITE'S
15.49

LURE OF THE TEMPTRESS
19.99

SHUTTLE
14.49

SPACE CRUSADE
12.99

SILENT SERVICE 2
12.99

RAINBOW CLTN
11.99

FLAMES OF FREEDOM
11.49

ELITE
11.99

3D POOL
13.99

GAMES

A320 AIR-BUS	RD6235...21.99
ADDAMS FAMILY (1 MEG)	RD6463...11.49
ADVANTAGE TENNIS	RD6201...16.99
AFTERBURNER	RD5768 ...7.49
AIR BUCKS	RD6256...17.99
AIR SEA SUPREMACY (GUNSHIP, SILENT SERVICE, P47, F15 STRIKE EAGLE, CARRIER COMMAND)	RD6168...13.49
ALIEN 3	RD7363...19.49
AMBERSTAR	RD7433...19.99
ANOTHER WORLD	RD6194...16.99
ARCHER MACLEAN'S POOL	RD7155...13.99
AWESOME	RD5383 ...8.49
B17 FLYING FORTRESS (1 MEG)	RD7428...21.99
BART Vs THE WORLD	RD7361...19.49
BATMAN THE MOVIE	RD7013 ...7.49
BATTLE OF BRITAIN D/S	RD5237...13.99
BATTLEHAWKS 1942	RD7230...10.99
BEYOND ZORK (INFOCOM)	RD5028 ...3.99
BLUES BROTHERS	RD6123 ...8.99
BOXING MANAGER	RD6256 ...6.99
CAESAR	RD7128 ...7.49
CARL LEWIS TRACK & FIELD CHALLENGE	RD6427...16.99
CHAMPIONSHIP MANAGER	RD6259...12.99
CHAMPIONSHIP MANAGER 1992/93 (1 MEG)	RD7423...17.49
CHAOS ENGINE	RD6478...16.99
CHUCK ROCK	RD5689 ...8.99
CIVILISATION (1 MEG)	RD7427...21.99
COOL WORLD	RD7045...17.49
CORRUPTION (M/SCROLLS)	RD5044 ...3.99
CRACKDOWN	RD7238 ...6.99
CRAZY CARS 3	RD6480 ...9.99
CRYSTAL KINGDOM DIZZY	RD7459...12.99
D-GENERATION	RD6315...13.99
DARKMERE (1 MEG)	RD7057...16.99
DEJA VU	RD7114 ...5.99
DIZZY PANIC	RD7450 ...7.49
DIZZY PRINCE YOLKFOLK	RD7452 ...7.49
DIZZY'S EXCELLENT ADVENTURE	RD7457...15.99
DOODLEBUG	RD7055...12.99
DUNGEON MASTER & CHAOS	RD6350...19.49
DYNA BLASTERS	RD7284...19.99
ELITE	RD5036...11.99
EPIC	RD5394...19.49
ESCAPE FROM THE PLANET OF THE ROBOT MONSTERS	RO7003 ...7.49
ESPANA-THE GAMES 92 (1 MEG)	RD6457...19.49
F15 STRIKE EAGLE 2	RD5191...11.99
F16 FALCON (SPECTRUM HGLOBYTE)	RD5033...10.99
F19 STEALTH FIGHTER	RD5080...14.99
FA PREMIER LEAGUE FOOTBALL (ACTION) (1 MEG)	RD7310...17.49
FANTASTIC WORLDS (REALMS, PIRATES, MEGA LO MANIA, POPULOUS, WONDERLAND) (1 MEG)	RD7030...22.99
FANTASY WORLD DIZZY	RD7438 ...7.49
FINAL COMMAND	RD7460 ...5.99
FIRE & ICE	RD6352...17.49
FIRST DIVISION MANAGER	RD7440 ...7.49
FIRST SAMURAI + MEGA LO MANIA	RD6162...13.49
FISH (M/SCROLLS)	RD7170 ...9.99
FLAMES OF FREEDOM (MIDWINTER 2)	RD5566...11.49
FOOTBALLER OF THE YEAR 2	RD7375 ...8.49
FORMULA 1 GRAND PRIX	RD6001...14.99
FUTURE WARS	RD7226 ...9.99
GAUNTLET 2	RD5062 ...7.49
GHOULS 'N' GHOSTS	RD7240 ...7.49
GOBLIINS 2	RD7234...17.99
GODS	RD5641...16.99
GOLDEN AXE	RD5334 ...8.49
GOLF WORLD CLASS LEADERBOARD	RD5766 ...8.49
GRAHAM TAYLOR'S SOCCER MANAGER	RD5416...19.99
HARLEQUIN	RD6011...12.99
HEAD OVER HEELS	RD6079 ...7.49
HEIMDALL (1 MEG)	RD6141...11.99
HEROQUEST	RD7367 ...8.49
HEROQUEST 2 - THE LEGACY OF SORASIL	RD7371...16.99
HOLLYWOOD COLLECTION (RDBOCDP, GHOSTBUSTERS2, INDIANA JONES ACTION, BATMAN THE MOVIE) D/S	RD5430...10.49
HOOK	RD6266...11.99
HOT HATCHES	RD7313...17.49
IK+	RD5776 ...7.49
INDIANA JONES 2 ACTION (FATE OF ATLANTIS)	RD6239...17.49
INDIANA JONES ADVENTURE	RD5805 ...9.99
INTERNATION RUGBY CHALLENGE	RD7119...17.49
INTERNATIONAL SPORTS CHALLENGE	RD5215...19.49
ISHAR - LEGEND OF THE FORTRESS	RD6408...10.49
ISHAR 2 (1 MEG)	RD7395...17.99
JAMES POND	RD5441 ...7.49
JAMES POND 2 - ROBOCOD	RD5706...16.99
JIMMY WHITES SNOOKER	RD5844...15.49
KICK OFF 2 D/S	RD5284...10.99
KILLING GAME SHOW	RD5244 ...7.99
KNIGHTS OF THE SKY (1 MEG)	RD5518...13.99
KNIGHTMARE	RD6133 ...8.99
KRUSTY'S SUPER FUN HOUSE	RD7365...19.49
LAST NINJA 2	RD7007 ...7.49
LEGENDS OF VALOUR	RD7212...24.99
LEMMINGS	RD5492...12.49
LEMMINGS DATA DISK - OH NO!	RD5971 ...9.99
LEMMINGS 2	RD7109...19.99
LETHAL WEAPON (1 MEG)	RD7042...16.99
LOMBARD RAC RALLY	RD5098 ...7.49
LOTUS ESPRIT TURBO CHALLENGE	RD5385 ...8.49
LOTUS TURBO CHALLENGE 2	RD6007 ...9.99
LOTUS 3 - THE FINAL CHALLENGE (1 MEG)	RD7152...13.49
LURE OF THE TEMPTRESS	RD5400...19.99
M1 TANK PLATOON	RD7464...10.99
MAGIC WORLDS (STORM MASTER, DRAGONS BREATH, CRYSTALS OF ARBOREA)	RD7176...15.99
MAGICLAND DIZZY	RD7446 ...7.49
MANCHESTER UNITED	RD7278 ...8.49
MANIAC MANSION	RD7466 ...9.99
McDONALDS LAND	RD7158...17.49
MEGA SPORTS (SUMMER GAMES 1 & 2, WINTER GAMES)	RD6486...16.99
MICROPROSE 3D GOLF	RD5997...13.99
MIDNIGHT RESISTANCE	RD7001 ...7.48
MIDWINTER	RO5227 ...9.99
MIG 29 (1 MEG)	RD7420 ...9.99
MOTORHEAD	RD5508...11.99
NEW ZEALAND STORY	RD7011 ...7.49
NICKY BOOM	RD7299...15.99
NIGEL MANSELL'S WORLD CHAMPIONSHIP	RD7154...18.49
NO SECOND PRIZE	RD7431...17.49
OPERATION STEALTH	RD7468...10.99
OPERATION WOLF	RD5774 ...7.49
PANG	RO7005 ...7.49
PANZA KICK BOXING	RD7246 ...8.49
PARASOL STARS	RD6270...16.99
PICK 'N' PILE	RD7167 ...3.99
PIRATES	RD5040 ...9.99
PITFIGHTER	RD5926 ...7.49
PLAYER MANAGER	RD5223 ...6.99
POPULOUS & PROMISED LANDS	RD7408 ...9.99
POPULOUS & SIM CITY	RD5132...16.99
POPULOUS 2 (1 MEG)	RD6297...19.49
POWER UP (CHASE HQ, TURRICAN, X-OUT, ALTERED BEAST, RAINBOW ISLAND)	RD5677...10.99
POWERDRIFT	RD5207 ...3.99
POWERMONGER D/S	RD5353...19.49
POWERMONGER WORLD WAR 1 DATA DISK	RD5616...11.49
PREMIER MANAGER	RD7286...13.49
PRINCE OF PERSIA	RD5561 ...7.49
PRO TENNIS TOUR 2	RD5645...16.99
PUSH-OVER	RD6435...16.99
OUEST & GLORY (BLOODWYCH, MIDWINTER, CADAVER, IRON LORD)	RD6339...13.99
RAGNAROK	RD7034...21.99
RAILROAD TYCOON (1 MEG)	RD5289...13.99
RAINBOW COLLECTION (BUBBLE BOBBLE, RAINBOW ISLANDS, NEW ZEALAND STORY)	RO5515...11.99
RAVING MAD (MEGA TWINS, JAMES POND 2 - ROBOCOD, RODLAND)	RD7220...16.99
REACH FOR THE SKIES	RD7162...19.99
REALMS	RD6033...14.99
RICK DANGEROUS	RD7242 ...7.49
ROBIN HOOD LEGEND QUEST	RD7455 ...7.49
ROBOCOP 2	RD7334 ...7.49
ROBOCOP 3	RD6143...11.49
ROCKET RANGER	RD5070...11.99
ROOKIES	RD6532...19.99
SABRE TEAM	RD7061...11.49
SCRABBLE	RD5066...18.99
SECRET OF MONKEY ISLAND (1 MEG)	RD5449...13.49
SENSIBLE SOCCER (92/93 SEASON)	RD6354...16.99
SEYMOUR GOES TO HOLLYWOOD	RD7448 ...7.49
SHADOW OF THE BEAST 2	RD5325...16.99
SHADOWGATE	RD5016 ...3.99
SHAOQWLANDS	RD6249...19.49
SIM WORLDS	RD7070...15.99
SHOPPING BASKET (6-8 YRS)	RD8176...13.49
SHUTTLE	RD6104...14.49
SILENT SERVICE 2 (1 MEG)	RD5295...12.99
SIM CITY & POPULOUS	RD5200...16.99
SLEEPWALKER	RD7307...20.49
SMASH TV	RD7336 ...7.49
SPACE CRUSADE	RD7013...12.99
SPACE CRUSADE DATA DISK	RD7290...10.99
SPECIAL FORCES	RD6213...13.99
SPIKE IN TRANSYLVANIA	RD7442 ...7.49
STARCROSS	RD7171...11.99
STORM MASTER	RD6253 ...9.99
STREETFIGHTER 2	RD7144...18.49
STRIKER	RD6423...15.99
STUART PEARCE'S SOCCER SELECTION'S (KICK OFF 2, MICROPROSE SOCCER, MANCHESTER UNITED, INTERNATIONAL SOCCER)	RD6459...12.99
STUNT CAR RACER	RD7248 ...7.49
SUPER CARS 2	RD5630 ...8.49
SUPER HANG ON	RD5770 ...7.49
SUPER SEYMOUR	RD7444 ...7.49
SWITCHBLADE 2	RD7272 ...8.49

EDUCATIONAL

ADI MATHS (12-13 YRS)	RD6658...16.49
ALVIN'S PUZZLES (6-8 YRS)	RD9185...13.49
FUN SCHOOL 2 (2-6)	RD5120 ...7.99
FUN SCHOOL 2 (6-8)	RD5124 ...7.99
FUN SCHOOL 2 (8+)	RD5128 ...7.99
FUN SCHOOL 3 (2-5 YRS)	RD5300...15.99
FUN SCHOOL 3 (5-7 YRS)	RD5305...15.99
FUN SCHOOL 3 (7+ YRS)	RD5309...15.99
FUN SCHOOL 4 (2-5 YRS)	RD6546...15.99
FUN SCHOOL 4 (5-7 YRS)	RD6550...15.99
FUN SCHOOL 4 (7+ YRS)	RD6554...15.99
MICRO ENGLISH (8 YRS TO GCSE, CONFORMS TO NATIONAL CURRICULUM)	RD9025...16.99
MICRO FRENCH (BEGINNER TO GCSE, CONFORMS TO NATIONAL CURRICULUM)	RD9033...16.99
MICRO GERMAN (BEGINNER TO GCSE AND BUSINESS LEVEL, CONFORMS TO NATIONAL CURRICULUM)	RD9037...16.99
MICRO MATHS (11 YRS TO GCSE, CONFORMS TO NATIONAL CURRICULUM)	RD9029...16.99
MICRO SCIENCE (8 YRS TO GCSE, CONFORMS TO NATIONAL CURRICULUM)	RD9150...16.99
NODDY'S PLAYTIME (EDUCATIONAL PROGRAM FOR CHILDREN AGED 3+)	RD9115...16.99
WHICH? WHERE? WHAT? (4-8 YRS)	RD9182...13.48

UTILITY

3D CONSTRUCTION KIT 2	RD9010...31.99
HOME ACCOUNTS 2	RD5965...34.99
PAINT POT 2 (4-10 YRS)	RD9179...13.49
SHOOT-EM-UP CONSTRUCTION KIT	RD7282 ...8.49

THE ADVENTURES (SUPREMACY, HUNTER, CORPORATION)	RD7387...13.99
THE IMMORTAL	RD7417 ...9.99
THE MANAGER	RD5272...19.99
THUNDERHAWK	RD5863...10.49
TITUS THE FOX	RD6304 ...9.99
TRANSARTICA	RD7355...17.99
TRDJAN - CYBER A55AULT (LIGHT PHAZER GAME)	RD9076 ...8.99
TROJAN - FIRESTAR (LIGHT PHAZER GAME)	RD9077 ...8.99
TRDJAN - THE ENFORCER (LIGHT PHAZER GAME)	RD9078 ...8.99
TURRICAN	RD7250 ...7.49
TURRICAN 2	RD7252 ...7.49
ULTIMA 5	RD5075...14.99
UNINVITED	RD5051 ...5.99
UNIVERSAL MONSTERS	RD7303...16.99
UTOPIA	RD5915...11.49
VROOM	RD6172...12.99
VROOM DATA DISK	RD6475...12.49
WHEELS OF FIRE (HARD DRIVIN', POWERDRIFT, CHASE H.Q. TURBO OUTRUN)	RD5382...15.99
WIZ-KID	RD6439...16.99
WWF WRESTLING	RD6071...16.99
WWF WRESTLING 2	RD7050...16.99
ZAK MCKRACKEN	RD7222 ...9.99

WIN £10,000 WORTH OF PRIZES IN THIS ISSUE OF NRG

ATARI LYNX 2

ATARI LYNX 2 BATMAN PACK

WITH BATMAN RETURNS GAME

FREE Membership

FREE Mains Adaptor

99.99

GG6903

ATARI KIT CASE FOR LYNX, ACCESSORIES AND GAMES
GG5678
16.99

CLEANING KIT FOR ALL CONSOLES OR HAND-HELDS ..... GG6065 ...6.99

COMLYNX MULTI-PLAYER CABLE FOR LYNX ..... GG5881 ...9.99

MAINS ADAPTOR FOR ATARI LYNX (UK MAOE) ..... GG8095 ...9.99

BATTERY PACK FOR LYNX (REQUIRES SIX HP2 BATTERIES) ..... GG6793 ...8.99

BLACK CARRY BAG FOR LYNX 2 WITH GAME AND ACCESSORY COMPARTMENTS
GG8097 9.99

STEREO EARPHONES FOR USE WITH LYNX (ALSO FOR USE WITH PERSONAL STEREOS)
GG6882
3.99

CARRYBAG FOR LYNX 2
GG5860
10.99

STORAGE RACK FOR CARTRIDGES (STACKABLE)
GG6885
9.99

SUN VISOR/ SCREENGUARD FOR LYNX
GG6886
7.99

GAMES

APB	RC5538...23.99
AWESOME GOLF	RC6751...24.99
BASEBALL HEROES	RC6758...23.99
BASKETBRAWL	RC5539...23.99
BATMAN RETURNS	RC6893...27.99
BATTLEZONE 2000	RC8179...23.99
BILL AND TED'S EXCELLENT ADVENTURE	RC6753...23.99
BLOCK OUT	RC8182...16.99
BLUE LIGHTNING	RC5269...24.99
CABAL	RC8004...23.99
CHECKERED FLAG	RC5540...23.99
CHIPS CHALLENGE	RC5270...16.99
CRYSTAL MINES 2	RC6760...22.99
DAEMONSGATE	RC8181...23.99
DINO OLYMPICS	RC8180...23.99
DIRTY LARRY - RENEGADE COP	RC6761...23.99
DRACULA THE UNDEAD	RC6918...27.99
ELECTRO COP	RC5271...18.99
EYE OF THE BEHOLDER	RC8213...27.99
GATES OF ZENDECON	RC5272...23.99
HOCKEY	RC6759...23.89
ISHIDO	RC5350...19.99
JIMMY CONNORS' BAD BOY TENNIS CHALLENGE	RC6914...23.99
JOUST	RC8210...23.99
KLAX	RC5483...16.99
LEMMINGS	RC8007...23.99
LYNX CASINO	RC5541...23.99
MALIBU BIKINI VOLLEYBALL	RC6915...23.99
MS PACMAN	RC5486...16.99
NFL FOOTBALL	RC5542...23.99
NINJA GAIDEN	RC5725...23.99
NINJA GAIDEN 3	RC8214...27.99
NINJA NERD	RC8005...23.99
PACLAND	RC5136...23.99
PINBALL JAM	RC6512...23.99
PITFIGHTER	RC5929...27.99
POWER FACTOR	RC8211...23.99
RAI-DEN	RC8003...23.99
RAMPART	RC6051...23.99
ROAD BLASTERS	RC5526...23.99
ROBOSQUASH	RC5543...16.99
ROBOTRON 2084	RC6754...18.99
ROLLING THUNDER	RC8001...23.99
RYGAR	RC5544...23.99
S.T.U.N RUNNER	RC5424...23.99
SHADOW OF THE BEAST	RC5193...23.99
SLIMEWORLD	RC5489...16.99
SPACE WAR	RC6913...23.99
STEEL TALONS	RC6916...23.99
SUPER ASTEROIDS/MISSILE COMMAND	RC8212...23.99
SUPERSKWEEK	RC6786...23.99
SWITCHBLADE 2	RC8000...23.99
TOKI	RC5400...24.99
TURBO SUB	RC5547...17.99
ULTIMATE CHESS CHALLENGE	RC5960...24.99
ULTRA STAR RAIDERS	RC8006...23.99
VIKING CHILD	RC6736...23.99
VINDICATORS	RC8002...23.99
WARBIRDS	RC5549...24.99
XENEPHOBE	RC5527...23.99
ZARLOR MERCENARY	RC5528...23.99

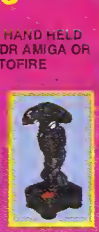
FOR A FREE 12 PAGE COLOUR CATALOGUE CALL
0279 600204

• 0279 600204 • Special Reserve Sales • 0279 600204 • Please note there is a 50p surcharge on software items ordered by phone.

ATARI ST PERIPHERALS

JOYSTICKS

BOLLISTICK HAND HELD JOYSTICK FOR AMIGA OR ST WITH AUTOFIRE FUNCTION
GG9142 9.99



CHEETAH "ALIEN 3" JOYSTICK
GG9087 13.99

CHEETAH "BART SIMPSON" JOYSTICK
GG9089 13.99

CHEETAH BUG JOYSTICK
GG6562 13.99

COMPETITION PRO EXTRA JOYSTICK (CLEAR BASE)
GG5146 10.99

COMPETITION PRO STAR JOYSTICK
GG5785 14.99

GRAVIS JOYSTICK FOR ATARI ST WITH FOAM PADDED GRIP, ADJUSTABLE HANDLE TENSION AND PROGRAMMABLE FIRE BUTTONS GG9022 ...23.49

LOGIC 3 SIGMA-RAY JOYSTICK
GG6575 11.99

MINI COMPETITION PRO 5000 JOYSTICK
GG9050 12.49

MINI COMPETITION PRO STAR JOYSTICK WITH AUTOFIRE
GG9051 15.99

QUICKJOY FOOT PEDAL TRANSFERS ANY JOYSTICK FUNCTIONS TO FOOT PEDALS. IDEAL FOR FLIGHT AND CAR SIM'S. COMPATIBLE WITH MOST AMIGA AND ATARI ST GAMES. GG6576 ...19.99

QUICKJOY JET FIGHTER JOYSTICK
GG5287 11.99

QUICKJOY OJ1 JOYSTICK (MICROSWITCHED)
GG6643 7.99

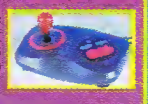
FOUR PLAYER JOYSTICK ADAPTOR FOR ATARI ST .....GG9204 ...7.99

JOYSTICK EXTENDER CABLE FOR ATARI ST (3 METRES).....GG6613 ...5.99

QUICKJOY TOP STAR JOYSTICK
GG5751 19.99

QUICKSHOT 111A TURBO 2 JOYSTICK
GG5656 9.99

QUICKSHOT 127 STARFIGHTER REMOTE CONTROLLER WITH TWO INFRA-RED JOYPADS .....GG5654 ...29.99



QUICKSHOT 128F MAVERICK 1 JOYSTICK
GG5655 12.99

QUICKSHOT 137F PYTHON JOYSTICK
GG5653 9.99

QUICKSHOT 149 INTRUDER 1 JOYSTICK
GG6644 22.99

QUICKSHOT 155 AVIATOR 1 JOYSTICK
GG6686 23.99

SQUIK MOUSE FOR AMIGA OR ATARI ST
GG5855 13.99

SUPER PRO ZIP STICK JOYSTICK FOR AMIGA OR ST WITH AUTOFIRE FUNCTION
GG9143 12.99

TROJAN LIGHT PHAZER GUN FOR ATARI ST WITH SKEET SHOOT AND ORBITAL DESTROYER GAMES (OTHER GAMES AVAILABLE - SEE "TROJAN" IN ATARI ST SOFTWARE LIST) .....GG9075 ...24.99

ZYDEC TRACKBALL
GG6650 24.99

NAKSHA MOUSE FOR ATARI ST WITH OPERATION STEALTH
GG5235 26.99

MOUSE MAT (LIGHT GREY) WITH *SPECIAL RESERVE* LOGO PRINTED IN RED .....GG5148.....4.99

PORT EXTENSION ADAPTOR FOR ATARI ST (CHANGE JOYSTICKS WITHOUT NEEDING TO REACH BEHIND COMPUTER) ...GG6616.....5.99

ROBOSHIFT INTERFACE FOR ATARI ST (PLUGS MOUSE & JOYSTICK INTO ONE PORT) GG5856 ...12.99

GAMEBOYS

GAMEBOY BUMPER PACK

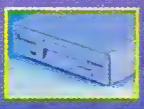
SAVE £1.98

WITH WITH TETRIS GAME, BATTERIES, STEREO HEADPHONES & TWO PLAYER LEAD, SUPER MARIO LAND & HANDY BOY

FREE Membership

99.99

BITS'N'PIECES



EXTERNAL 3.5" DISK DRIVE FOR ATARI ST WITH SONY/CITIZEN DRIVE MECHANISM, 880K FORMATTED CAPACITY, QUIET, HIGH QUALITY, SLIM LINE DESIGN. COLOUR MATCHED METAL CASE AND LONG REACH CONNECTION CABLE..... GG5854 .....49.99

POWER SCAN HAND SCANNER FOR ATARI ST 100-400DPI (INCLUDES SOFTWARE).....GG6699 ... 99.99

LEADS

HI-FI LEAD FOR ATARI ST (STANDARD PHONO INPUT)...GG6615 .....3.99

MONITOR LEAD FOR ATARI ST TO PHILIPS CM8833 MK2 MONITOR .....GG5962 .....7.99

SCART LEAD FOR ATARI ST TO PHILIPS TV (GIVES MONITOR QUALITY PICTURE).....GG9147 .....9.99

SCART LEAD FOR ATARI ST TO SONY TV (GIVES MONITOR QUALITY PICTURE).....GG9088 .....9.99

SCART LEAD FOR TV TO VIDEO (GIVES EXCEPTIONAL ENHANCED QUALITY PICTURE).....GG9146 .....9.99

DUST COVERS

DUST COVER FOR MONITOR (CLEAR PVC) .....GG5314 .....4.99

MISCELLANEOUS

CLEANING KIT FOR COMPUTERS (INCLUDES VACUUM) .....GG6542 .. 19.99

NULL MODEM CABLE .....GG5153 .....7.99

RF SWITCH FOR AMIGA, ATARI ST OR CONSOLE (SWITCH BETWEEN TV AERIAL AND COMPUTER WITHOUT DISCONNECTING) GG6617.....3.99

DISKS & BOXES

VERBATIM 3.5" DSDD DISK WITH LABEL 10 Pack £7.99

27.99 FOR 50

3.5" VERBATIM HIGH DENSITY DISK (1.4 MB) GG5264 **99p each**

PACK OF 10 VERBATIM BRANDED 3.5" DSDD DISKS WITH LABELS GG9137 7.99

PACK OF 20 3.5" VERBATIM HIGH DENSITY DISKS WITH LABELS.....GG9118 .....16.99

PACK OF 50 VERBATIM BRANDED 3.5" DSDD DISKS WITH LABELS.....GG5535 .....27.99

PACK OF10 TDK 3.5" MF-2DD DISKS (DSDD) .....GG9085 .....8.99

PACK OF10 TDK 3.5" MF-2HD DISKS (HIGH DENSITY) .....GG9086 ...13.99

BANX DISK BOX 3.5" (120) STACKABLE .....GG9144 .....13.99

BANX DISK BOX 3.5" (80) STACKABLE.....GG6591 .....12.49

DISK BOX 3.5" (10 CAPACITY) GG5187 .....1.99

DISK BOX 3.5" (120) LOCKABLE, DIVIDERS GG5323 9.99

DELUXE DISK BOX 3.5" (80), LOCKABLE. DIVIDERS GG5752 9.99

FLIPBOX DISK BOX 3.5" (20 CAPACITY) GG9145 7.99

DUST COVER FOR 80 COLUMN PRINTER (CLEAR PVC).....GG5313 .....4.99

3.5" DISK HEAD CLEANER GG5428 .....4.49

WITH REMOTE CONTROL. ENABLES MONITOR QUALITY PICTURE FROM AMIGA, SUPER NES, MEGADRIVE OR MASTER SYSTEM 1 VIA SCART CONNECTION. ALSO SUITS ATARI ST AND ALL CONSOLES VIA NORMAL RF INPUT. INCLUDES REAR SCART/EURO OR FRONT A/V INPUT (FROM SUPER NES STEREO LEAD OR VIDEO CAMERA) TO A/V CHANNEL. 60 CHANNEL TUNING. BLACK TRINITON SCREEN. INCLUDES LOOP AERIAL. EXCEPTIONAL QUALITY.

FREE Membership & Scart Lead

(FOR FREE SCART LEAD PLEASE STATE: AMIGA, ST, MEGADRIVE OR SNES)

199.99

CANON BJ-10EX PRINTER

BUBBLE JET PRINTER 64 NOZZLE, 80 COLUMN, 83LQ CPS 2LQ/1 DRAFT FONT, 1 YEAR WARRANTY.
A SMALL, PORTABLE PRINTER, VERY QUIET IN OPERATION YET GIVING OUTSTANDING PRINT QUALITY.
GG6632
214.99

CANON NICAD BATTERY PACK FOR BJ-10EX PRINTER
GG9125 39.99

CANON AUTO CUT SHEET FEEDER FOR BJ-10EX PRINTER
GG9126 54.99

INK CARTRIDGE FOR BJ-10EX PRINTER
GG6637 .....19.99

THIS IS JUST A SMALL SELECTION OF WHAT WE HAVE TO OFFER. FOR A FREE 12 PAGE COLOUR CATALOGUE RING
0279 600204
NOW!

Special Reserve Games Club

0279 600204

The Biggest and Best computer games club in the world. Probably.
Join now from £4.99 (UK) and get all this:

NRG – CLUB MAGAZINE
48 page colour bi-monthly magazine

Latest News and Reviews
NRG keeps you up-to-date on games and hardware

Over £30 worth of coupons
in each issue of NRG to save even more money!

Save £££'s on games
hundreds of special offers every month

WIN £10,000 worth of prizes every month!
Easy to enter competitions in every issue of NRG

Advance Order System
Order early. New games sent day of arrival

Credit Card Orders
Phone lines open to 8pm Mon-Fri & to 5pm Sat & Sun

FREE postage to the UK
All prices include VAT & there's no obligation to buy

We only supply members but you can order as you join.

Membership Fees:	UK	EC	WORLD
6 months	£4.99	£6.00	£7.00
1 Year	£7.99	£10.00	£12.00
2 Years & FREE NRG binder	£14.99	£20.00	£24.00

ALL FREE MEMBERSHIPS GIVEN WITH HARDWARE ARE FOR 6 MONTHS

We sell games and accessories, all at amazing prices, for Megadrive, Master System, Game Gear, Super NES, Gameboy, NES, Lynx, Amiga, Atari ST, IBM PC, CD ROM, PLUS SONY and Board Games!
Over 150,000 people have joined Special Reserve, so don't delay, join today!
You can phone in your order or use this coupon

Inter-Mediates Ltd. Registered Office: 2 South Block, The Maltings, Sawbridgeworth, Herts CM21 9PG. Inevitably, some games may not yet be released. Please phone Sales on 0279 600204 for latest release dates and stock availability. We reserve the right to change prices and offers without prior notification. E & O.E.

WE ONLY SUPPLY MEMBERS BUT YOU CAN ORDER AS YOU JOIN. THERE IS A SURCHARGE OF 50p PER GAME ON TELEPHONED ORDERS.
(PLEASE PRINT IN BLOCK CAPITALS) RAY

Name_____

Address_____

_____

_____ Postcode _____

Phone _____ Machine_____

Enter membership number (if applicable) or New Membership Fee

item _____

item _____

item _____

item _____

ALL PRICES INCLUDE UK POSTAGE & VAT £

Cheque/P.O./Access/Mastercard/Switch/Visa Switch Issue No_____

Card expiry date_____ Signature_____

Cheques payable to: **SPECIAL RESERVE**
P.O. BOX 847, HARLOW, CM21 9PH

Overseas Orders Surcharge (EC or World): Software orders please add £2.00 per item. Non-software items please add 25%. Hardware items supplied to UK mainland only.
Overseas orders must be paid by credit card.

Gamer GLOBE

Gamer ran down to London and, err got lost, but on the way they stumbled into the ECTS and took a swift look at all that is coming this year in the ST games world

Better late than never!

The biggest ST games news from the ECTS wos the foct thot Gremlin Grophics ore moking o version af Zool – Ninjo Of The Nth Dimensian for the ST.

This is greot news for all Atori owners becouse it just goes to show what can be achieved on the ST. Why Gremlin didn't release it ot the same time os the Amigo version is beyond Gomer.

Zaal wos releosed in September 1992 ond rode on o wave af critical occloim, receiving occalode ofter accalade. It racketed stroight to the top of the UK's Gallup chort, outselling the number two gome by four ta one, and quickly become one af the best-selling games af the year.

As for os orcode plotform gomes go, Zool is by for the biggest ond best releosed in recent times. On the Amiga, Zool featured stunning cartaany graphics, amozing ond funky tunes, greot sound effects, brilliont ployobility and was incredibly fost.

Zool wos the plotform of 1992 elsewhere and will undoubtedly be the best plotform gome of 1993 on the ST.

The levels ore all different. The first is the sweets level which is mode up of jellies, cokes ond lollies such os Chupo Chups who incidentolly were the sponsors af the game. Expect a free lally in yaur box – yum.

Other levels include the music level which is mode up of notes, hi-fis, trumpets and ather various musicol instruments. There is olso o shoot-'em-up level where Zool con occumulate laads of paints by callecting bonuses.

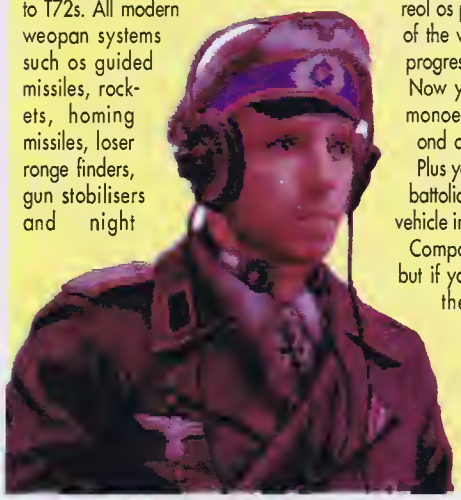
Zool – The Ninja From The Nth Dimension will be exploding onto your ST in September.

Empire strikes back!

Empire hove returned with o cauple af follow-ups to some old favourites.

The first is the sequel to Compaign, the Gomer Gold-roted World Wor sim. Wittily named Campaign 2, the gome promises ta be bigger, better ond quite simply the military simulotion of the year.

The whole system hos been updoted to include oll the post–war vehicles – over 100 new 3D shopes from Abroms to T72s. All modern weopan systems such os guided missiles, rockets, homing missiles, loser ronge finders, gun stobilisers and night sights have been odded.



It olso feotures onimoted infantry who con be deployed from personnel corriers into the bottlefield. Alsa, you con now drive oll of the vehicles in on improved 3D environment – including helicopters.

The real strength of Compoign 2 is in its strotegy. Empire hove been in long consultotion with octual military strategists to improve the gome to moke it os reol os passible. You now toke chorge of the whole compoign ond view the progress of each of your ormies.

Now you con control on ormy ond monoeuvre your divisians within it, ond olso commond your regiments. Plus you con either control the whole battolion or you con just control one vehicle in o 3D battle situatian.

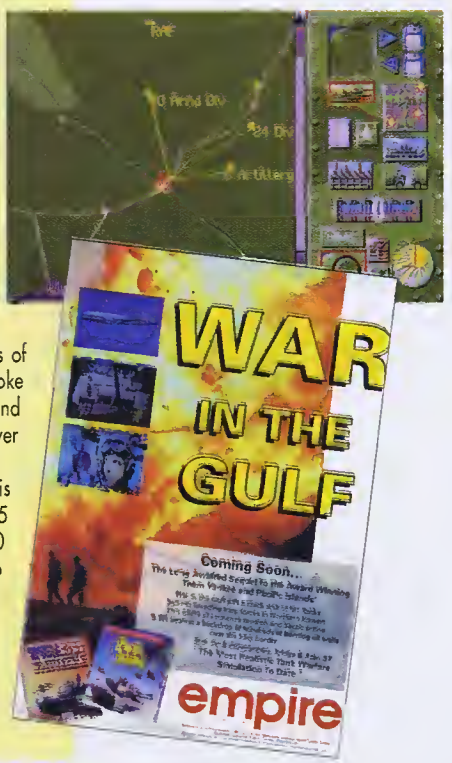
Compoign wos o mossive success, but if you're o military simulotion fon then it looks os though Compaign 2 will be the definitive wor gome for you.

Empire's other "sequel" is Wor in the Gulf, the lotest gome in the Teom Yonkee/Pocific Islonds series of tonk worfore simulotors. It's due to be releosed any time now, so expect a review of it in the immediote future.

The gome pits o crack unit of M1 tonks againsf invoding Iroqi forces in northern Kuwoit. Wor in the Gulf utilises the some computer technology which was previously used in Pocific Islonds.

The player tokes control of four groups af four ormaured vehicles. The first mission involves the toking over o series of islonds, then you'll hove to retoke two mojor Kuwaiti oil fields and push the Iroqis pushed back over the border.

Be worned! War in the Gulf is mossive ond it will toke over 15 separate tank battles in the 400 squore miles af oil field to achieve success – only the very best gomes ployers will succeed. Keep those binoculors sconned aver the Desert becouse Wor in the Gulf could well be massive.



Fodder for the masses...

Virgin Games are aut and about an the ST games scene with twa releases hitting the streets before Santa comes and pays yau all a visit.

Arriving this Autumn is Cannan Fadder, wanderfully sculptured by thase wacky lads dawn at Sensible Saftware.

The handy press release has the captian: "If war is hell, get ready ta play the devil." Cannan Fadder is a war game, but knawing Sensible Saftware it definitely wan't be heavily strategy-based and, hey, it cauld even be a bit af fun.

At yaur cammand are aver 300 canscripts with different skills. The idea is ta choose a platoon af crack troops and send them ta their deaths, err I mean battle.

There are 100 phases af actian with 30 different missians and five terrain types, including an English cauntry village.

Missians include rescuing the President fram an enemy base ta negatiating Arctic wastelands ta find the scud missile factary which is surraunded by booby traps. It's all in a day's wark far these troops.

Yau play the part af a military big cheese, wha just like real-life gives aut the arders ta his troops fram the camfart and safety af an armchair.

Yau can select a leader ar simply send a lane saldier inta battle and watch him get abliterated by machine gun fire!

When it comes ta the saund frant, Cannan Fodder gets tap marks. Every single event has an assaciated naise and it's packed full af spot effects and spaken wards galare. Yau can even hear the parrats squawk in the jungle.

This laaks like being a winner and will prabably sell laads af capies an the back af Sensible Soccer's success.

Virgin's ather release, scheduled far the summer, is the much-awaited Apocalypse. The idea is simple – yau take ta the skies in a super-sleek helicapter and brave everything the enemy can thraw at yau.

There are five levels af hat shoot-'em-up actian where bullets, flak, missiles and even the kitchen sink fly thick and fast.

This mindless mayhem is made even mare incredible thanks ta a range af stunning saund effects, such as machine gun fire and screams.

There is alsa a brilliant parallax effect which includes backgraund and faregraund abjects ta further enhance the unique depth af realism.

Miracle Games are handling the develapment af Apocalypse and they say the game will be a product almast warthy af appearing an a arcade machine.

The price is yet ta be annaunced, but make sure yau put it near the tap af yaur list when yau ga aut shapping far games this summer.

I'd just like to thank...

The ECTS Award winners were annaunced an Sunday April 4 at the Limelight Club in Landan. The anly ST game which wan an award was Farmula One Grand Prix which happily received the award far Best Simulatian.

Althaugh ST games had nine naminatians, the cansale and Amiga/PC markets daminated the awards.

The anly award which applied ta the ST was Saftware Publisher af the Year which Electranic Arts wan despite being put against same taugh appasitian fram Kanami, US Gald, Micraprase and Virgin Games.

The whale ceremany was hasted by Vialet Berlin, presenter af ITV's fantastic *Bad Influence* televisian pragramme wha Gamer learns did actually drap ane af the awards by accident, ha ha.

Alsa present were varaus members af tap re-farmed pop cambo Madness and almast everyane wha's anyane in the camputer games industry.

Let's hape next year that Atari, thanks ta the Falcan, get ane step beyand thase cansales in the award stakes.

INNARDS

Summertime rolls...

REVIEWS-REVIEWS-REVIEWS

GRAHAM GOOCH'S CRICKET 69
Happiness is a cigar called Hamlet...

INTERNATIONAL RUGBY CHALLENGE.....70
Sellotaped ears and bitter abound

ACTION SPORTS.....72
An athletic collection of sporting faves from Grandslam

PREMIER MANAGER '93 74
Paul's favourite game gets an update

REGULARS-REGULARS-REGULARS

GAMER GLOBE 66
All the latest news from the busting Amiga games scene

CHEAP SEATS 71
Get down the local discount shop with that Giro

BLAST FROM THE PAST 77
The Pakistani cricket team might be interested...

CHEAT MODE 78
We dish the dirt on Krisalis's war classic

Gamer GLOBE

Carry On up the Cyber

Cyberspace by Empire is a 3D role-playing game set in the year 2090 where massive corporations dominate the city. The name of the game in the future is survival and cybernetic implants are the norm.

Cyberspace uses the acclaimed bitmapped and vectar 3D technology that was first pioneered in Team Yankee and Pacific Islands.

A full-screen, 3D view is averlaid with o head-up display that can be used to display any information that you require. Inventary, weapans types, skill levels, latest videa releases, football league tables – all can be looked at in detail.

The city where Cyberspace is set is spilt inta 500 zones each with its own functian. Each zane contains about 100 buildings that range from hotels to offices to shops. Each and every building can be entered and explared.

Net-running capabilities enable yau ta lag an to computers and enter Cyberspace, the virtual reality representation of all computer-controlled systems in the game.

Surreal 3D abjects represent computers, electronic doors and security devices, all of which can be manipulated by the experienced net-runner.

Yep, we dan't knaw what the hell it means either, but the screenshats Gamer saw at ECTS were certainly impressive and I expect we'll be previewing it very soon.

Sa, keep tuned ta Gamer and yau'll find aut what this Cyberspace stuff is all about.

Fiery helicopter

Codemasters are back on the ST software scene and can you believe that the game doesn't feature that laveable egg Dizzy? Firehawk was originally one of Codemasters' smash hit American video games and involves players in daring land, sea and air rescue scenarios as they pilot the awesame helicapter knawn as the Firehawk.

Players use their skill ta pilat the gunship thraugh seven taugh and challenging missions. The objective is to rescue poratroopers in conflict with ormed forces, which are controlled by megalomaniac drug barons, on the Lafian Islands.

Firehawk is packed with power and bonus armaments can be accumulated as enemy installatians are eliminated. It is viewed fram averhead and features 360 degree scrolling.

Codemasters' Richard Eddy says: "Firehawk is certainly one of the most challenging games Codemasters has published as it cambines many different game play skills – quick reactians, logical planning of missions and stealthy manoeuvring."

One natable difference between Firehawk and previous releases is the fact that it's not a budget game and actually costs £19.99. Firehawk should be available in the immediate future, so keep watching those skies.

That'll be D-Day

US Gold's D-Day was created by the same development team who were responsible for perhaps the ST's greatest beat-'em-up, Panza Kick Boxing.

This is a totally original combination of strotegy ond simulotion. D-Day allows the player to re-enact Operation Overlord, when the combined sea, land and air farces af the Allies were used in the assault of the Narmondy Beaches, heralding the liberation of France.

In D-Day the player takes over from General Eisenhawer on the evening of the June 5 1944 to command the Allied forces in this challenging operotion. The game includes four simulations – bamber raids, parachute landing, tank manoeuvres and infantry engagements.

Each of these has a training mode consisting of seven different missions of increasing complexity. The campaign itself involves 144 different locations, 129 of them ta be distributed between the troops and 42 simultaneous engagements monoged by the computer.

If you want to succeed in Operation Overlord then you'll have to participate in up to 100 missians, including ten bomber raids, 15 parachute landings, 35 tank engagements and 45 infantry engagements.

D-Day should be available as yau read these words far around £30. It is 1Mb only.

It's flip the coin time...

Choose the best players from their batting averages

GRAHAM GOOCH WORLD CLASS CRICKET

In true English country gentleman style, Ben Styles chills out to the sound of leather on willow

Now before you turn off or turn over the page, just have quick look at the score box at the bottom of the page. Yes that right, it's a cricket game that's got a good score – a very rare onimol indeed. Not only is it a good cricket game, it's probably the only one on the market at the moment.

I'm not really a cricket fon, mainly because I don't fully understand the rules of the game, so I wasn't the really the best person to do the review. Nevertheless I do understond the basic rudiments of the sport.

To begin with you have to choose the different players who ore going to be in your team. The vast mojority you will have heard of but in the event of your having no ideo whot they ore like there ore vorious statistics to bock up your choice. Failing that, there is an icon you can click on that will choose the best 11 players.

It was this ease of use thot ottracted me to the gome. You could pick it up without ever having seen a game of cricket and be able to play.

You can choose from any of the main cricketing countries so you don't have to play the England team ond get beoten all the time. Plus you can moke up your own teams if you don't fancy the look of any of the others.

Once you are well into the gome, os with ony spart, you con go to o little more depth. All of the batting and bowling averages are listed for you so you can plan whot order your squad will ploy in ond who will play and who won't.

It's all very civilised os cricket is supposed to be – to decide who is going to do what in the first innings you have to toss a coin.

Whot first drew me to Grohom Gooch's was the foct thot it wos easy to play. In the post cricket gomes were reserved for fanatics because there was very little ployobility. Here the control methods for bowling and battling are very clever ond well thought out.

When the other team is batting you have to control the speed and the angle of the boll. To stort with you hove o small squore on the ground which controls where the ball will bounce ofter you have thrown it.

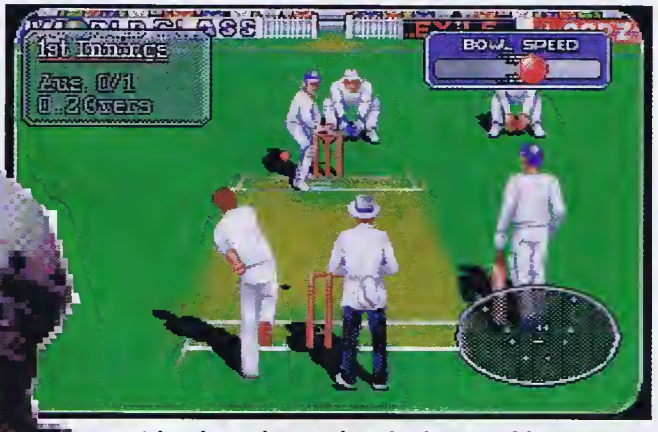
After this is determined you have to woggle the joystick in true decothlon style to pick up speed. You won't always want top speed – slow shots are always good for fooling the batters. On top of the bowlers you have to control one of the fielders ond get him to chuck the ball back as soon as it comes his way.

The batting control is little easier – you just have to move the batter into line with the incoming ball and press Fire ond forward at the correct time.

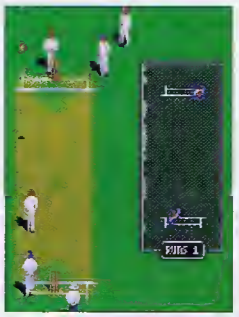
It wouldn't be fair not to mention the hilarious tune complete with steel drums. Proper cricket music! The rest of the sound is just spot effects, nothing startling.

I liked Grohom Gooch's because it strikes o good bolonce between the orcode and strategy sides. It could have been a poinfully dull and slow gome but with some floshy graphics and not too mony facts and figure it deserves a fair innings.

BEN STYLES



I don't know about you but I'd rather play cricket on the computer than have someone hurl a ball of leather and cork at me at 80 mph



The overhead camera shot – watch in glee as your shot orbits Pluto

Choose you weapon, all the best cricketing countries... and England

VISION	GGGGGGG●●●
AUDIO	GGGGG●●●●●
DIFFICULTY	GGGGGGGG●●
LASTABILITY	GGGGGGGG●●

To me this is the definitive cricket gome. If you like sports simulations then there is no other cricket progrom to get.

75%

Publisher ➤	Audiogenic
Developer ➤	Audiogenic
Disks ➤	1
Price ➤	£29.99
HD Install ➤	N/A
Size ➤	1 meg

The control screen - functional but not flashy

The managerial bit, in-depth enough if you want to get into the game but not to much to bog the gameplay

England's new all-stars team, England (Joystick) take the pitch

INTERNATIONAL RUGBY

Sellotape back your ears and grunt at people with Domark's latest...

Conversion time, be careful of the wind, it really does make a difference

A very timely release indeed this, with England steaming through the Rugby Sevens to win. It seems fitting that we should release a game and have a quick gloat.

But this respectable win doesn't take away the fact that you have to be six foot two, 15 stone and drink masses of bitter to be a rugby player. If you are a ten-stone weakling and a coward to boot like me you don't want to be on the wrong end of huge bloke hurtling through the air with an odd-shaped ball.

So what can you do if you still want the excitement and the gameplay? Get the computer game, of course.

When I first booted up IRC I was impressed by the smoothness with which everything ran. The title screen and intros were very tastefully executed leaving you in a good frame of mind for the game.

The control screen isn't the most detailed I've seen but after a few minutes of fiddling you get the hang of what all the tools do.

One aspect I found very impressive was the use of hot keys on the menus – it's possible to just press the one designated letter of the option you want instead of waiting until your cursor gets over there.

By far my favourite aspect is the fact that you can play the game on different levels, so if you are purely interested in the action, you can completely ignore the management side and vice-versa.

If you just fancy going for a quick knockabout you don't have to take into account that three of your men are injured and that you are in deep financial trouble – that is if you don't want to.

As soon as IRC came into the office it was a case of nudge nudge, wink wink, same plonker's mode a rugby game.

But as it turns out they have made a pretty fair jab at the central method. It's similar to many of the football simulations – the member of the team that you are controlling at one particular time is depicted by an arrow above his head. This changes as the ball move around.

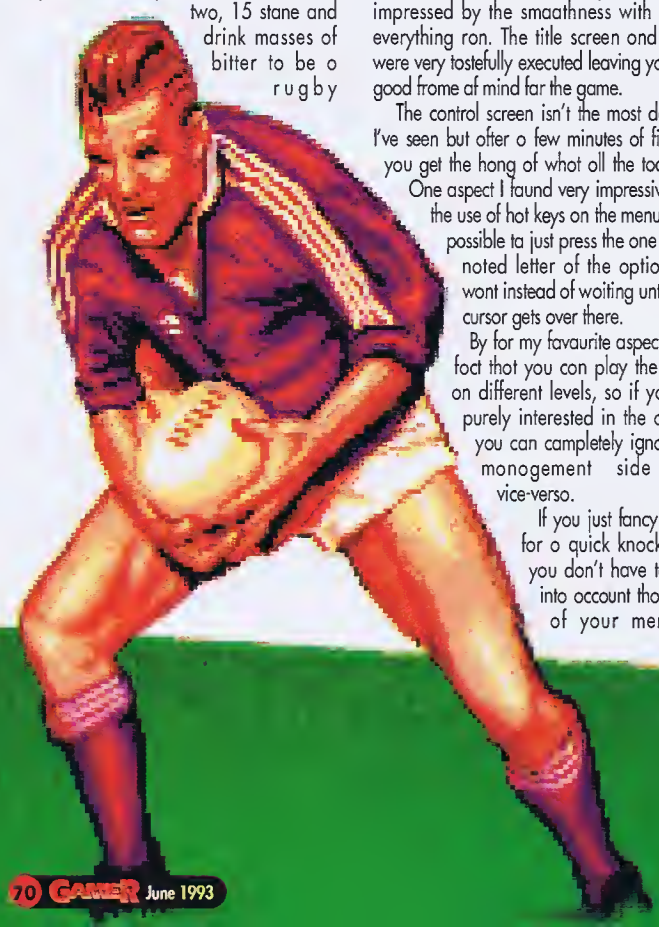
As you probably know, you have to get the ball past the line at the end of the pitch and as near to the posts as you possibly can. Once this is achieved you can convert your try and gain more point. The conversion entails you kicking the ball from a set distance away over the crossbar but still between the two upright poles. In Rugby the conversions central is very similar to a golf sim – you have to click at the right time for the speed and power then you have to click for the aim.

To pass to other players on your way down the field there are two methods. You can either click your button quickly and your player will make a pass in the direction where a team member should be, or you can hold down the button and a target will appear.

You have to do this pretty quickly and aiming takes a bit of getting used to but it works in the end. As far as we could tell the rules and the gameplay were almost perfectly faithful to the real thing.

There was the occasional discrepancy or niggle, for instance when the apposition kick the ball back into your half you men seem to run around it and not pick it up until the appositian have caught up with it. But apart from that IRC is a winner! Well done Domark.

BEN STYLES



VISION	
AUDIO	
DIFFICULTY	
LASTABILITY	

A fun and very playable sports simulation. It must have been a tricky thing to do but Domark have made a very good job of it.

87%

Publisher ➤	Domark
Developer ➤	Domark
Disks ➤	1
Price ➤	£25.99
HD Install ➤	N/A
Size ➤	1 meg

The CHEAP seats

As we have been told for the last two years, the recession is ending. But we're all still skint, so Ben Styles gives us his three best budget buys for this month

International Truck Racing

Zeppelin Platinum ▪ £7.99

Could you really take a game seriously that boasted Realistic Tractor and Trailer Behaviour and Aerodynamics? I mean, come on, racing 38 tonnes of truck around a race way? It's not sport, it's a cross between suicide and a demolition derby.

When I sit back and look at ITR I think that it could have been made very fun. If the programmers had bothered to make it a bit more arcadey and included bonuses or power-ups, maybe it would have basically been a Super Cars-type game.

But no, it's deadly serious – you even have to do a practice lap before you can race against the other trucks and you actually race on quite accurate circuits from around the world.

When you finally get to race the other trucks you notice that they barely fit on the track. This may be very realistic but it doesn't do the game justice, and there are loads of penalties to pick up – I got disqualified for cutting cross country which is sometimes necessary

To finish off the serious side of the program there is a league which you truck participates in. I'm sorry but I just can't take it seriously.

Shoot-Em-Up Construction Kit

GBH ▪ £7.99

The program that launched a thousand PD games. Yes the infamous S.E.U.C.K. is finally on budget so you too can knock out your own vertical scrolling shoot-'em-ups.

It was a brilliant idea for a program. It's not quite a game although you can play any of the games you create within it and it's not quite a serious package because of the nature of the thing.

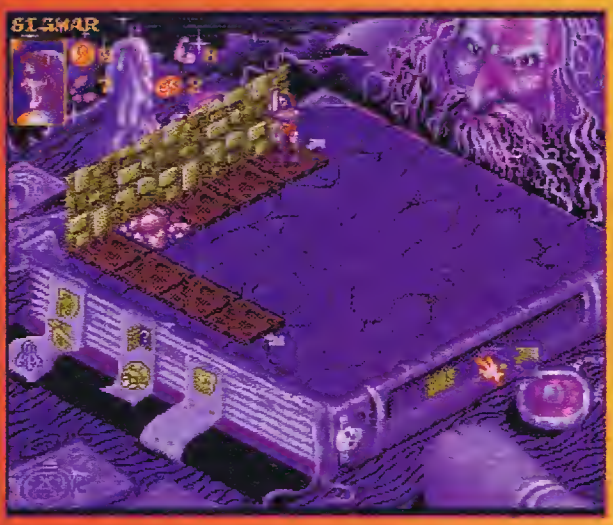
It enables you to make overhead multi-directional scrollers and vertical scrolling shoot-'em-ups. Once you have used the package for a bit you get used to its capabilities. You can make some really good stuff, but your early attempts are invariably crap. Biff wrote a really playable vertical scrolling car game, for instance.

Once you have chosen which style your game is going to be in you can go the sprite editor. When it comes down to it the program works on very basic principles but it's effective all the same.

Editing the sprites is a very time-consuming process. Each character has to be altered, and all the different directions which this character can face also have to be taken into consideration. You can edit the colours too.

By far the favourite part of the S.E.U.C.K. is the sound. You have a list of samples which you can assign to any event in your game. Better still, you can load in your own samples, but you have to create them on sampler and save them as IFF files. S.E.U.C.K. comes way up in our Top Ten Budgets of the Year.

GAMER GOLD



Hero Quest

GBH ▪ £7.99

Break out the Led Zep albums, it's ghost and goblins time again. Hero quest is a fantasy role-player where you play either a Wizard, Barbarian, Elf or Dwarf.

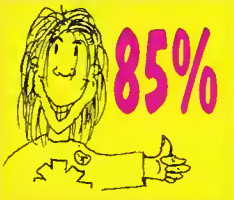
As you would imagine they all have their strang and weak points. The Dwarf wouldn't make a very good high jumper and the Barbarian wouldn't be a brilliant Physicist. Joking aside, Hero Quest is one of the best role-play adventures around.

There is loads of scope because you are not just tied down to doing one or two missions – there are loads.

There can be up to five players on the board at once so it's a good one to play with your mates. In this version the computer plays the evil wizard (for a change) but apparently there is a board game where you can play the role of the nasty guy.

As you play you collect all sorts of goodies, gold jewels – the usual stuff. These you can trade in and buy things with, like weapons and armour, which come in handy because you are always getting into strife.

A definite thumbs up from me for this – many games try to do what Hero Quest has done and fail. A good buy.



The lone skier admires how workmen got those letters on the hill!

ACTION

Strapped for cash? Is your wallet bare? Well why not examine this recession-beating four-in-one game compilation from Microids?

Superski 2

This game was originally released last summer and it has to be soid that it didn't exactly set the games world alight. Whatever happened to Superski 1 was the question that we asked last year and we still don't know what happened to it or whether it actuolly existed at oll. Answers on a postcard please...

Superski 2 is definitely here though and it features six events for you to test your skill on and an ideal opportunity to go ond get out on the piste. Hic!

The events start off with the downhill, the exciting chance to ski down a hill at 90 mph and see if you can make it to the bottom without breaking both your legs.

The next is the slalom which is similar to the downhill except you have to ski in and around a set of blue and red flags. Giant slalom follows and as the name suggests it's almost identical to slalom, but the hill you ski down is a lot bigger and thus a lot faster and you've probobly got a better chance of seriously injuring your skier.

Ski jumping is one of the most fun events and involves throwing your death-defying skier off a massive ramp and then watching him/her hit the ground ond hoping that he/she lands safely.

The last event is the unusually titled Hot Dog. Despite popular belief this is not a meaty sausage served in-between two baps with tomato sauce and onions on top, but is in fact similar to the downhill except it's o lot slower and more importantly you do lots of tricks.

Perform back flips, front flips, flip flops, err, flipper the dolphin and so on to impress the fussy judges.

The only non-skiing event is the bob sleigh where you and a couple of mates sit in a metal tube and ride round an icy course at a 100 mph .

It's sort of like a ride at Alton Towers, but unlike a theme park ride there is an massive chance of killing yourself. Hey, it's fun, fun, fun all the way when you try out winter sports.

The graphics are really good, the sound is fairly reasonable and the gameplay is all right. Some events are far better than others, but if you want to waste a few hours and your in that wintry sports kind of mood then Superski 2 is a worthy inclusion on this compilation.

Choose your event and get down to it

Grand Prix 500II

Grand Prix 500 II

Hmm, now I think I recognise this game and it definitely wasn't called Grand Prix 500 II. Ah, yes I remember it now, it's all coming back ta me. Way back in September 92, Gamer reviewed a game called Hot Rubber and despite its title it was a very poar motorbike racing game which only received 43 per cent – quite simply it was a bag of crap.

In fact, the only notable thing to be said about Hot Rubber was the fact that on the caver af the bax was a photograph af a nubile, scantily-clad girlie partly wearing bike leathers while straddling a hot throbbing motorbike. If that wasn't enough then inside the box was a poster which was indeed incredibly sad and wauld anly appeal to the most perviest af pervs.

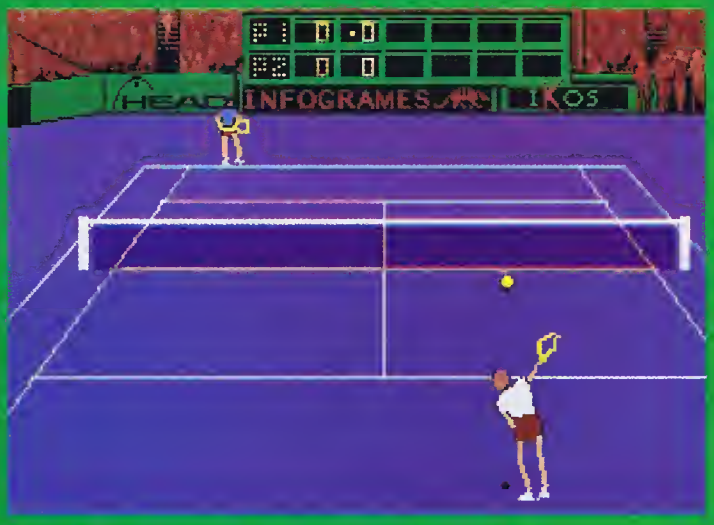
Hot Rubber was a bog standard motorcycle racing game for one ar two players. When the two-player mode was in operation the screen split in half allawing, err twa players ta play simultaneously. This was perhaps the most interesting feature af the game and I think that speaks valumes about it.

The sound is pathetic, the graphics are not bad, but they jerk along like a confused tortoise, and the gameplay is non-existent.

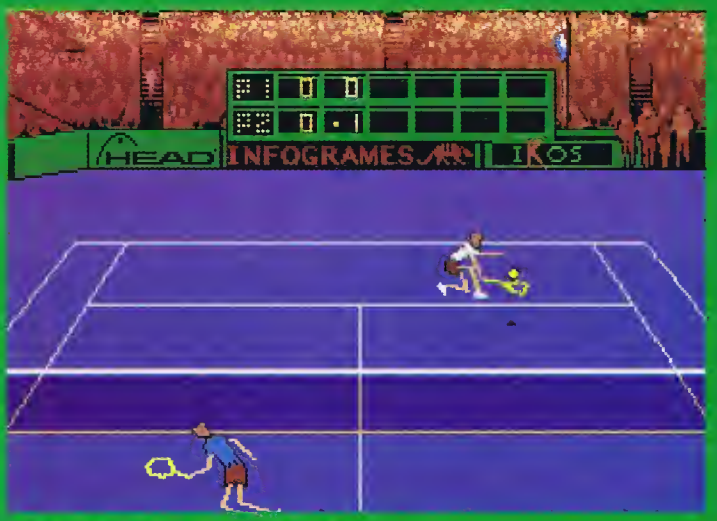
This is the worst game aut af the four and I advise you never to even load it up if you buy this campilatian. Rubbish, but then almast every campilatian has an absalute stinker in it and Hot Rubber/Grand Prix 500 II, no matter what you call it, is na exception.

The engines roar and zoom off around the track. Woo, hold me down

He's off... his bike and his trolley by the looks of things



Advantage Tennis, one of the most underrated games of all time



I never knew Boris Becker was that skinny!

AdvantageTennis

This is undoubtedly the best of the bunch – the highly underrated Advantage Tennis. Pro Tennis Tour has dominated the tennis games world for too long. Advantage Tennis is the mast realistic, smooth, playable and enjayable tennis game I've ever played. I was wary at first because the game was made by Infagrammes and the French aren't known for their prowess in the sporting department, but all my fears were put aside as soon as I played it.

It does loak strange because af the graphics. The tennis players look like little stick men, but as soon as they start moving they are very impressive, and because the graphics aren't very detailed the game runs very fast and smooth.

All of the tennis shots are included such as the smash, the farehand and even the fancy and downright poncey between-the legs-shot.

There is a brilliant practice aptian where you can return balls to your heart's content thanks to the automatic ball server. Once you've practised you can compete against professianal tennis players such as Becker and Agassi and ga all around the world earning tons af dosh.

The actual presentatian is amazing, with a good dose of sampled sound and speech. Playability-wise yau can't go far wrong.

Advantage Tennis is quite simply the best game out of the four and is worth £30 by itself. All four games aren't massive and weren't that popular first time around, but if you're a sporty fan and you want a decent compilation then Action Sport could well be begging for you to run into your local computer store and grab it.

SPORT

The crowd goes wild, as the killing commences...

Killerball

I persanally had never heard af Killerball before I received this campilatian, sa this game was a tatally new experience far me. It takes mast af its ideas and it's name fram the cult classic film.

The game invalves twa raller-skating teams whase jab it is ta scare mare goals than their appanents. Goals are scared by thrawing a small metal ball inta a hale in the wall.

Yau'd prabably think that this wauld get a bit baring after a while – well it wauld da if it wasn't far the fact that in a game af Killerball there are na rules.

Basically, yau can punch, kick, maim and destray yaur appanents and it's all dane in good clean fun.

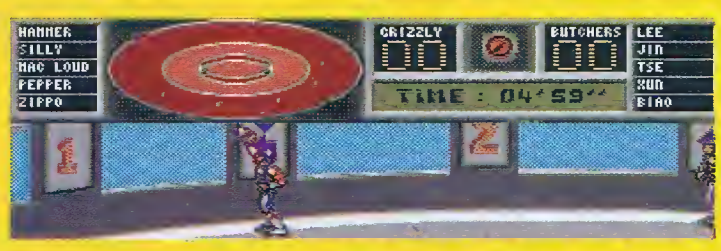
"Sorry ald man, I didn't mean ta break bath yaur arms and stuff them dawn yaur throat, but I was trying ta get this blasted metal ball inta the hale in the wall."

See, haw violence can be fun, but dan't farget kids, before yau grab a pair af rallerskates and try it aut dawn at the lacal park I have ta remind yau that it's nat real. Please stay at hame waggling yaur jaysticks and the warld will be a calmer and mare peaceful place.

The game warks all right as a ane player, but it really comes inta its element with twa players – yau can invite all yaur chums araund and bash them ta bits.

Yau can get quite addicted when playing against yaur friends, but Killerball daes lack in the graphics and saund department. It's nat the best game in the warld, but campared ta Hat Rubber it's a godsend.

JONATHAN MADDOCK



SUPERSKI 2

GGGGGGG●●●

GRAND PRIX 500 2

G●●●●●●●●●

ADVANTAGE TENNIS

GGGGGGGGGG

KILLERBALL

GGGGGGG●●●

Basically Action Sport has one obsolutely brilliant game on it, two half decent anes and one that should have been shat at birth, but if this kind af compilation tickles your fancy then you are well advised to check it out.

84%

Publisher ➤	Electronic Arts
Developer ➤	Dinamic
Disks ➤	1
Price ➤	£25.99
HD Install ➤	No
Size ➤	½ meg

CHAMPIONSHIP

Could you manage Manchester United and win the Premier League title? Here's your big chance, grab your mouse and get down to it...

Here's the main menu where all the other options are at your disposal

The football league season is finally coming to a close. It's now the time of hearty promotion and relegation battles. Manchester United are, at the time of writing, sitting smugly at the top of the league and it looks as though Alex Ferguson has finally achieved league success for the Red Devils for the first time since 1967.

The pressure of controlling a football club must be immense. Not only do you have to run the team and make sure you've got the best 11 players on the park on a Saturday afternoon, but you must also keep an eye on the money situation and the general running of the club.

The question to be asked in this review is, could you have done it? Could you have taken a football club like Manchester United to the league title? Well thanks to Domark you can find out.

As the great Bill Shankly once remarked "Football isn't a game of life and death – it's much more important than that."

There are two types of computer football games. The first is the action/arcade game like Sensible Soccer or Kick Off where you have direct control over your team. There is much more to football than just playing it, though, and this is reflected in the second type of game.

The management type has been around since the days of the Spectrum where Football Manager was the definitive football game. Not much in the way of graphics or sound, but the playability was unbeatable.

One of the most recent football games to hit the charts was Premier Manager by Gremlin and a lot of you punters out seemed to have enjoyed it immensely.

A year or so ago, Domark released Championship Manager and it fared pretty well in the cruel world of computer games sales. It was probably the most realistic football management game I'd ever played, so you can well imagine the grin on my face when I heard about the brand new updated version.

Yep, Championship Manager '93 is here and it promises to be the best football management simulation ever in the whole wide world. That's some statement, but I have the sneaky suspicion that Domark fully intend not to break that promise. If I were to detail every new feature in this updated version of Championship Manager then Gamer would be full up and besides I haven't got time. I'll run through a few of them though. Basically everything has been updated. The Premier League is now included plus all the cup competitions all have their proper names.

All the player data is now correct and when you click on the player's name you get a full screen of statistics. You basically get a full run down on the player in question from number of goals scored to his previous club history to the colour of his underpants.

This information coupled with the player's real name gives CM 93 that edge of realism, simply because you can relate to the players better.

Other features include a brand new scout system, player loans, upgrading of stadia, injury time, manager's salary, own goals, win bonuses, more board comments and many more.

There is also a five-week gap before the start of the season, so that you can organise friendlies, then select your best team and get your players up to match fitness. This is a nice little touch and it's the first time I've seen it done in a football management game.

As I mentioned before the real names add that touch of realism to the game, but they also have the correct ages, so it's only going to be a matter of time before you have to re-name your team to Parkside Old Folks Wanderers.

To stop this from happening CM 93 generates new players to come into the game, obviously you won't of heard of them, but it's nevertheless a very good idea.

Another big addition to the game is the inclusion of foreign players into the transfer market. There are in fact 100 foreigners and the game includes a wide variety of players and countries.

Unless you're a totally loopy football fan then you will never heard of any of them apart from the odd Italian here and there and that's only thanks to Channel Four's Sunday afternoon TV programme. You never know, you might pick up a Pele or two!

Take a gander at the screenshots and you'll see that CM 93s not graphically fantastic. The whole game is controlled using the mouse and centres around a menu system which involves a lot of clicking.

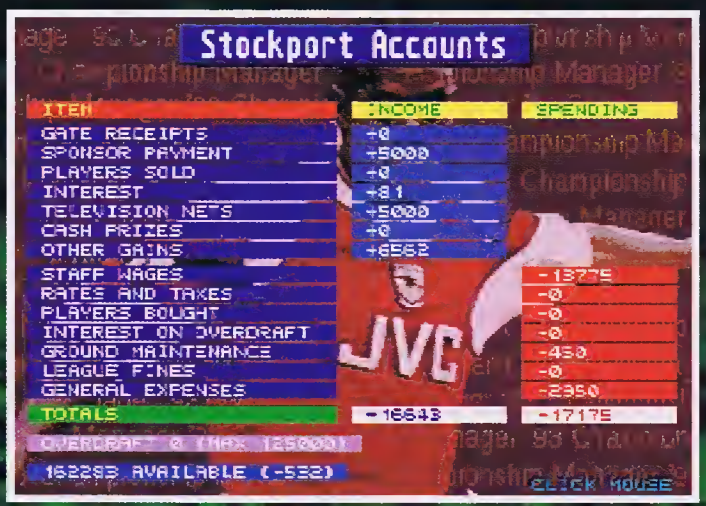
The only graphic of interest is the choice of pictures which you can have as your backdrop to the game. There are seven or so to choose from.

You can chaase a nice picture of the charming Chelsea midfield dynamo Andy Townsend, or you can even leave it totally blank – the choice as they say is yours...

One thing you should know about is the actual match day. Now this is nothing like what I expected when I first saw it. The set-up of the screen is incredibly basic with the time set in the top right corner, the two team names and six little bars at the bottom.

You get a running commentary of the game, but it's all done in broken English. An

The squad in full. Where on earth did I put Paul Gascoigne?



The other side of football... the accountant

MANAGER '93

example would be " Rush rounds keeper. Rolls it in net. Gaal. Gaal disallowed, Referee spotted handball offence." It does seem strange at first, but after about five matches you become used to it.

Well I can see the ref signalling to his linesman and we've played two minutes of injury time, so I'll sum up for you.

Championship Manager is the most complete football management sim I've ever played. The sheer amount of detail that's gone into it is unbelievable. Simply because so much time and effort has been put in by the games creators, it deserves a Gamer Gold.

Everything you think should be in a management game is in Championship Manager 93. Internationals, transfers, scouts, penalties and so on are all there. It will appeal to the dedicated football fan, but I also think it could do rather well with other gamesplayers because it is so good. Graphically it's not brilliant, but I don't think that this type of game warrants amazing graphics anyway. The sound department is virtually non-existent with only a couple of cheers in there when you scare a goal, but again it's not the type of game that needs sound. It's positively overflowing with playability and is highly addictive.

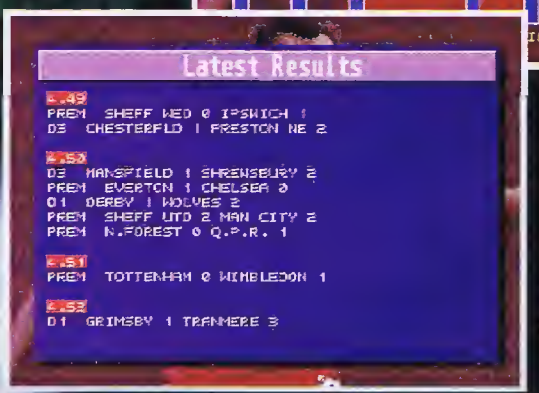
There are two ways to buy the game. The first is to run down the shops and poy £29.99 for it. The second is to upgrade your original Championship Manager by sending the disks and £7.99 to those nice chaps at Intelek who can be reached at: Championship Manager '93, Intelek, PO Box 1738, Bournemouth BH4 8YN.

Ta put it simply, Championship Manager is Ryan Giggs, while all the other management games are Tony Adams. I rest my case.

JONATHAN MADDOCK

Hmm, this program is true to life. Look County play the long ball game, just like in real-life, coo!

It's that all important match day and County have won!



The teleprinter just like Grandstand have. Where's Des Lynam when you need him?

There is a brief news flash in-between games which keeps you up to date on the squad and job front

VISION

AUDIO

DIFFICULTY

LASTABILITY

This is the best football management game that you can get. Graphically and sonically it won't set your pants alight, but as far as playability and addiction go you can't go wrong. Brilliant.

92%

Publisher ➤	Domark
Developer ➤	Interlek
Disks ➤	1
Price ➤	£29.99/ £7.99
HD Install ➤	N/A
Size ➤	1 meg

WE GIVE YOU A ★FREE★ DISK WITH YOUR 1st ORDER AND A ★FREE★ GAME WITH SOFTWARE ORDERS OVER ★£40★(our choice)

★ COMPILATION SUPER DEALS ★

10 Great Games	£14.95
Magnetic Scrolls Collection	£12.95
2 Hot 2 Handle	£12.95
Virtual Reality Vol 1	£12.95
Virtual Reality Vol 2	£12.95
Action Masters	£12.95
Super Heroes	£11.95
Champions	£10.95
Hannah Barbera Collection	£7.95
Light Force (ST Only)	£7.95

★ BEST SELLER SPECIALS ★

Street Fighter 2	£18.95
Sleepwalker	£18.95
Civilisation	£25.95
Dalek Attack	£13.95
Sensible Soccer 92/93	£17.95
Epic	£20.95
Sim City/Populous	£23.95
Super All Stars	£17.95
Dungeon Master/Chaos Strikes Back	£23.95
Striker	£17.95
Head Coach 3	£17.95
Fire & Ice	£17.99
Archer Maclean Pool	£17.95
Premier Manager	£17.95
Leisure Suit Larry 1	£18.95
Special Forces	£23.95
AV8B Harrier Assault	£23.95
Elite	£18.95
Campaign	£24.95
Battlehawks 1942	£13.95
Lotus 3 Ultimate Challenge	£17.95

★ BARGAINS AT £6.95 EACH ★

Hudson Hawk – Super Off Road – Twin World – Euro Super League – Smash TV – Windwalker – Big Run – Trivial Pursuit – Fun School 2 – James Pond – Prince of Persia – Int. Ice Hockey – Ikari Warriors – Sleeping Gods Lie – Firezone – Airborne Ranger – Bubble Bobble

★ BARGAINS AT £5.95 EACH ★

Pacmania – Pacland – Neighbours – Classic 4 – Batman – Tetra Quest – Shuttle II – Goldrunner II – Atomino – Bloodwych – Starblade – Galaxy Force – Baal – Savage – Pacmania – Total Recall – Photon Storm – Robocop 2 – Table Tennis Sim – Blasteroids – Fighting Soccer – Fun School 2

★ OR ANY TWO FOR £9.95 ★

IF YOU CAN'T SEE WHAT YOU NEED, CALL US! WE CAN NORMALLY SUPPLY ANY ITEM.

★ CLASSIC STRATEGY GAMES ★

Austerlitz	£9.95
Conflict Europe (ST)	£9.95
Borodino	£9.95
Vulcan	£17.95
Overlord	£17.95
Frontline	£18.95
Ancient Battles	£18.95
Space Crusade	£18.95

★ THE FALCON 030 ★

	1 Meg	4 Meg
No HD DRIVE	£559	£729
65 MB DRIVE	–	£909

★ ATARI S20 ST ★

NEW PACK ONLY £159.95

★ DISKS W/LABELS ★ BRANDED

BULK	DSDD	DSHD	DSDD	DSHD
10 =	£4.90	£6.95	£6.00	£9.50
50 =	£23.95	£32.95	£27.50	£45.00
100 =	£44.95	£62.95	£50.00	£85.00
200 =	£79.95	£119.95	£95.00	£164.00

★ ACCESSORIES ★

12 Holder Slimpak	£0.95
100 Holder Lockable	£7.95
3.5" Disk Labels 40 for	£0.95
3.5" Head Cleaning Kits	£3.95
ST Dust Covers	£3.95
Mouse Mats	£3.95
Twin Mouse/Joystick Extenders	£4.95

★ RIBBONS ★

Star LC10 Mono	£3.45
Star LC10 Col	£5.95
Star LC24/10 Mono	£3.95
Citizen 120D Mono	£3.45

★ PROOUCTIVITY SOFTWARE ★

Cyber Paint v2	£39.95
Mailshot Plus	£29.95
Home Accounts	£17.95
Utilities Plus	£9.95

MODEM USERS CALL GAMES HQ ON:

Infoseft – 0642 764245	Dream Machine – 0222 341713
The Exchange – 091 383 1358	Skull – 0379 740792
Ultimate – 0642 565936	Black Cat – 0222 707356
Desktop – 0782 541305	Six 5/8 – 0273 688888
Cyclone – 0603 260973	Pacific Lightning – 0732 845338

Send £1 in Stamps for our Disk Catalogue with FREE PD
P&P £1.50 PER WHOLE ORDER,
£2 EXTRA PER 50 DISKS. £5 FOR COMPUTERS
We accept all major Credit Cards

GAMES H.Q. Dept STU6, Box 17, Coulby Newham, Middlesbrough, Cleveland TS8 9YW

FAX: 0642 822 700
TEL: 0642 595 182

FEDERATION II

IF YOU'RE NOT ON... YOU'RE NOT IN!

On-line
081-539 6763
8-N-1

Technical Support
081-558 6114

PREMIUM BULK 3.5" DS/DD DISKS

25	11.49
50	20.99
100	37.99
200	71.99
250	88.99
500	173.99

ALL DISKS ARE FULLY GUARANTEED AND ARE COMPLETE WITH LABELS

3.5" SUPERIOR LOCKABLE DISK BOXES

Qty	100 Cap.	140 Cap.	Bank Box
1	4.49ea	6.49ea	9.95ea
2	4.39ea	6.39ea	9.75ea
4	4.19ea	6.19ea	9.50ea
6	3.99ea	5.99ea	9.25ea

3.5" PREMIUM DISKS WITH OUR BOXES

100 Cap. box + 50 3.5" DS/DD	24.99
100 Cap. box + 100 3.5" DS/DD	41.49
140 Cap. box + 100 3.5" DS/DD	43.99
90 Cap. Bank box + 50 3.5" DS/DD	29.99

SNAP COMPUTER SUPPLIES LTD

HOTLINE
0703
457111

RIBBONS - POST FREE

Full Mark Brand	2 off PRICE EACH	4 off PRICE EACH
Citizen 120D/124D Swift 24	2.75	2.55
Citizen Swift 24 Colour	13.95*	
Panasonic KXP 1080/1123/1124	3.25	3.05
Star LC10/LC20	2.60	2.40
Star LC10-4 Colour	5.90	5.70
Star LC24-10/24-200	2.95	2.75
Star LC24-10 Colour	10.95*	
Star LC200	3.00	2.80
Star LC200 Colour	10.95*	
Star LC24-200 Colour	10.95*	
Ribbon re-ink	12.95	

COMPATIBLE INK JET REFILL

HP Deskjet 500 Double Refill	9.95
Canon BJ10E Double Refill	9.95

*Minimum order - 2 ribbons, except those marked with an asterisk **

ACCESSORIES - POST FREE

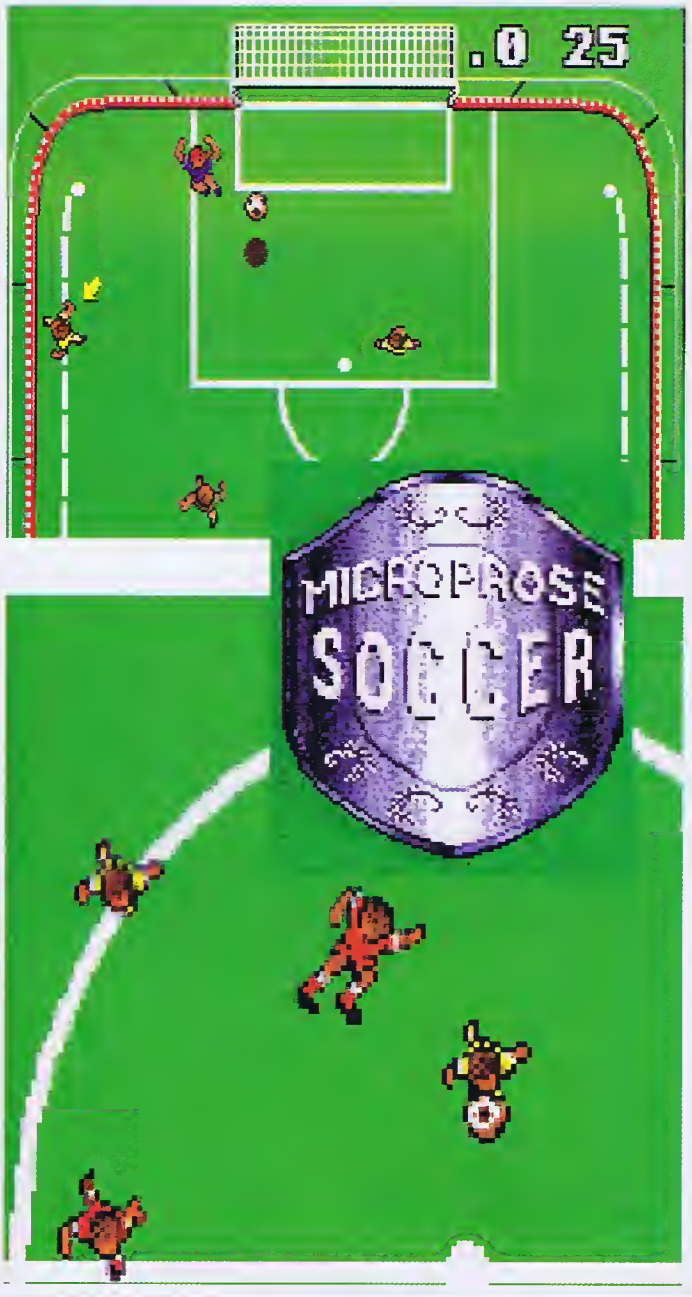
Mouse Mat	2.99
Mouse Holder	2.99
Roll 1000 3.5 Disk Labels	8.99
Atari ST dust cover	3.50
Phillips monitor cover	3.99
Star/Citizen/Panasonic 80 colour Printer cover	3.99

All products are subject to availability - All prices include VAT. Please add £3.50 p+p for disks and boxes. E&OE.

VISA

SNAP COMPUTER SUPPLIES LTD Fax: 0703 457222
Unit 16, The Sidings, Hound Rd, Netley Abbey, Southampton SO3 5QA

Access



BLAST from the PAST

Yes, it's time again to look fondly back to the days when almost every game was new, exciting and original

Microprose Soccer

Imogine o time when Sensible Soccer wos just o mere fidget in o progrommer's ponts ond when Kick Off didn't exist. Yes I know it's hord to believe, but there wos such o time ond it wos way, way bock in 1988.

Microprose ore now the kings of the flight simulotor, but there wos o time when they brought out other gomes such os Microprose Soccer.

Microprose Soccer wos the first footboll gome thot I ever bought for my ST ond boy, oh boy wos it fun. Looking bock on it today the sound ond graphics ore very sod indeed, but the good thing wos thot it wos os playoble os onything of thot ero.

Ploy wos viewed from obove rother like o certoin gome progrommed by Dino Dini which I promise I won't nome for the rest of this review.

Microprose Soccer con be ployed outdoors, where your opponents ore internotionol World Cup teoms, or indoors where you compete with professionol teams from the Stotes. Eoch ployer hos o number of shots which he con perform including bonono shots ond even overheod kicks. All con be corries out with the joystick.

Four gomeploying options ore ovoilooble, the first being the Microprose Internotionol Chollenge where you ploy every World Cup teom storting off with, ohem, Omon ond if you're good enough finishing with Brozil.

The second is the World Cup tournoment where you obviously ploy out the World Cup. The next is the soccer leogue ond the lost is a two-ployer friendly where if you're lucky enough to hove o chum you con ploy ogoinst him/her in o gome of bitter rivolry.

Microprose might not look like the world's best footboll gome, but o few years ogo it wos quite simply the ultimote. Sensible ond Kick Off moy hove superseded it now, but for sheer enjoyment you con't beat Microprose Soccer.

Falcon

The first simulotor thot I ever hod the pleosure of ploying wos Folcon – in foct it wos the first gome I ever owned. Woy bock then Folcon wos on unbelievoble piece of soffwore guoronteed to moke everybody's jow foll open in omozement.

Even if you didn't like flight sims thot much, you hod to own Folcon simply because it wos thot good – otherwise you were frowned upon ond lobelled "sod" for the whole of your life.

This oword-winning flight simulotion of the F-16 Folcon wos creoted by Spectrum HoloByte. It feotured stote-of-the-ort 3D grophics ond wos so reolistic thot you could olmost imogine yourself in the heot of bottle.

You could select from 12 missions which voried immensely. One minute you could be shooting down o Mig-21, the next completely destroying whole suspension bridges. The Folcon's cockpit is os reolistic os the reol thing right down to the heod-up disploys ond cockpit controls.

The gome hos five skill levels ronging from Lieutenont to Colonel. Other feotures included o heod-to-heod dogfight mode vio o direct computer link which is immense fun if you con find o friend to ploy the gome with.

The 3D ospect of the gome is porticulorly impressive with o whole ronge of multiple views. In foct the whole gome is well presented – it's just obout one of the most polished flight sims thot I've ever come ocross.

It is on obsolute dream to ploy – modern doy flight sims pole in comporison. Looking bock on it quite literolly brings o tear to my eyes.

If you wont o good flight sim then Folcon is the ideol one to stort you off, plus there ore quite o few mission disks thot you con now buy to enhonce your originol product.

Folcon is on obsolute clossic ond rightly deserves its ploce in Blost from the Post. Sigh... ohh those were the days.

SABRE TEAM

At long last we can finally dig the dirt on the Krisalis's Sabre Team. We sent in Ben Styles to smoke some embassies and complete the jungle level

First off I will list the four best troops and their main abilities – these are the ones that I found to be tops, but a different combination may work better for you.

W Jones – Trooper

His two most outstanding abilities ore his speed ond strength. He is very impressive when it comes to grenodes os he con throw them much further thon any of his colleagues.

Unfortunotely, Jones is locking in the morksmonship deportment. This con be helped by giving him on L7A2 which will increase his obility.

He olso locks intelligence which plays a port in his obility to notice or hear things. His height con olso occosionally be an advantage os he is pretty short.

C Calvert – Trooper

As he is renowned for his speed ond perception, Calvert is exceptionally good at hearing ond spotting enemy movement. He is quite good with a gun so he is more thon copoble of dealing with most situations.

He works best with a G3 which is the lightest weapon with the longest ronge. Moke sure he is kitted out with at least twa magazines. This is becouse he will hove more encounters due to his obility to spot trauble

T L Roderick – Sergeant

The leader af the graup is also the third fostest soldier in the porty. His obility with a gun is incredible so you should orm him with the M16A2.

Although he possesses on average perceptian rating and poor strength, his other qualities more thon moke up for it. One finol thing to remember! Do not, under ony circumstonces, expect him to throw o grenode occurately.

This is extremely importont when he is occomponied by a hastage.

L P McDonald – Lance Corporal

Although he is pretty much your Mr Averoge, McDonold hos good speed, ond when you give him on L7A2, his morksmonship is very good.

As the dodgy saying goes: "Jack of all trades, master of none!" His moin weakness is his perception but even in this deportment he is only second to Trooper Calvert.

Choosing the correct weopons and equipment is olso important when you ore obout to enter o mission. Eoch player should be given o bullet-proof vest ond an S10 respirator.

Give CS gos grenodes (no more than two) ta Trooper Jones and Lonce Corporol McDonold. Give the medical kit ta McDonald as well (I'll exploin loter!) but don't use the spore. This will sofeguord you in cose McDonold is lost in actian.

Moke sure you only use one mogozine for those guns that have o good copocity. Any more (except in the cose of Colvert) ore o woste if yaur soldiers ore cut dawn in action.

Stun grenades ore the least effective weapons but they con actually kill on enemy when they ore used ot close range. They ore quite limited, however, so try not to use them oll.

WEAPONS AND EQUIPMENT

L7A2

Usuolly two shots from this mochinegun ore enough to toke out the enemy ot o greot distonce. Unfortunotely, only two ore avoiloble ond ommo is scorce. If you find ony ommo for this gun, grob it quickly.

M16A2 & G3

These ore usuolly the second choice for guns. There is nothing much between them in terms of close combot occurocy ond weight. Three shots will usuolly kill someane but the G3 leoves o lot to be desired ot great distonces.

• *Do not swap any weapon between the missions as this results in a loss of ammo which is already loaded in the guns.*

The medical kit

There ore only two of these to begin with but you con find some more on loter missions. It is o good ideo to split the team up into teams of two, eoch con then corry o medicol kit, possing it on to the injured person.

CS gas & stun grenades

These two items ore both very hondy in tight corners when you ore under ottock from oll sides. Moke sure you hove enough oction points to throw them or you could end up in o tricky situotion.

Gas mask

An essentiol item ond fortunotely there ore enough to go oround.

Bullet-proof vest

Another indispensoble item. It cuts down the omount of domoge inflicted by bullets.

General Tips

Always collect useful equipment from the deceased members of your team. For instance: gas masks, bullet proof vests, medical kits and any decent weapons. Always grab the medical kit.

Move slowly in teams of two and cover each other's backs. Save at least 20 action points in sticky situations.

JUNGLE TACTICS – LEVEL ONE

Your objective for mission one is to rescue four hostages who are being held within the confines of a prisoner of war camp. Once all the hostages have been rescued you must guide the remaining members of your team to safety.

When reinforcements are called in they usually come through the main gate that you used to enter the camp. It is a good idea if you leave one of your party on these gates to deal with them when they arrive. This acts as perfect protection when your other team members are bringing out hostages.

You'll probably find that McDonald is the best man for the job. You can also leave a medical pack with him as he will be in the best position to aid any of his fellow soldiers.

The first two hostages are in the hut at the bottom left hand-corner of the camp. Trooper Jones is the best man to tackle this as there are quite a few enemy soldiers patrolling the area.

Using his speed, he can get in the door and dispose of the main guard. The main guards, unlike the randomly-placed enemy troopers, are always positioned in the same place. One such guard is always near the main gates at the beginning of this level.

The next hostage is placed in the hut directly in front of the main gates. As this is the easiest hostage to rescue, Sergeant Roderick is best used here as he doesn't quite have the speed of Trooper Calvert.

The last hostage is situated in the hut to the far right of the camp. He is one of the trickiest to rescue because of the surrounding windows and the open space. Use Trooper Calvert to get the hostage out and take him back through the trees.

Don't take him back near the fence as the reinforcements will be able to pick you both off with considerable ease.

When operating your soldiers, always try to leave them with about 15 action points at the end of their turn. This will give you a better chance of getting an opportunity move.

When you are searching one of the huts and your turn ends, try to leave your soldier with his back to the wall. This way he can see all the camp and it will be easier for him to survive.

If you do get shot and manage to survive, try to head for cover. The two best forms of cover are the trees and huts so try to get to them if you have enough action points left. Even after you have received treatment, keep well hidden until you have enough action points left to make it to some more cover.

The more experienced players will find this level pretty easy to complete with just two soldiers, namely Jones and Calvert. Although it will take longer, you'll be able to save your other team members for the later levels.

Move into the jungle, but keep an eye out for the enemy

Your team should be spread out otherwise the enemy could end your game in one go

It's the easy way to get your

ATARI ST USER

Subscribe now!

and we'll pop it through your letterbox right on time and postage free each month

● *Which 12 issue subscription...*

New	Renewal		
☐ 9402	☐ 9403	UK subscription	£39.95 (including P&P)
☐ 9404	☐ 9405	Europe/Eire subscription	£47.95
☐ 9406	☐ 9407	Rest of World subscription	£62.95
☐	☐	Canada/USA*	$98

☐ *Tick if you do not wish to receive promotional material from other companies*

*Canada and USA subscribers send to: Europress (North America), Unit 14, 225 Bysham Park Drive, Woodstock, Ontario, NT4 1P1, Canada. Tel: 519 539 0200, Fax: 519 539 9725.

● *How to pay...*

☐ I enclose a cheque/Eurocheque payable to Europress Enterprise Ltd
☐ Please debit my credit card

Expires ☐☐/☐☐

No. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

☐ 3 issue direct debit (£7.99 – complete form below. UK only) *9353*

● *Deliver my magazine to...*

Name ..... Tel No .....

Address .....

..... Postcode .....

Subscription Direct Debit Instruction

Complete this form only if you have ticked the Direct Debit option. Send the original form, no faxes or photocopies please.

AUTHORITY TO YOUR BANK/BUILDING SOCIETY TO PAY DIRECT DEBITS

Please complete this section to instruct your bank/building society to make payments directly from your account. Then return this form to us – no stamp needed.

Europress Direct, PO Box 2,
Ellesmere Port, South Wirral, L65 3EA

Originator's Identification No. 8 5 1 4 1 2

For office use only Ref No. .....

Name of bank/building society.....

Address.....

.....

.....

Name of account.....

Your account no. ☐☐☐☐☐☐☐☐

Sort code ☐☐ ☐☐ ☐☐

Signature(s).....

Date .....

Your instructions to the bank/building society:

- I instruct you to pay Direct Debits from my account at the request of Europress Ltd.
- The amounts are variable and may be debited on various dates.
- No acknowledgement required.
- I understand that Europress may change the amounts and dates only after giving me prior notice.
- I will inform the bank/building society in writing if I wish to cancel this instruction.
- I understand that if any Direct Debit is paid which breaks the terms of the instruction, the bank/ building society will make a refund.

Bank/building society may decline to accept instructions to pay Direct Debit from some types of accounts.

Send this form to Europress Direct, FREEPOST, Ellesmere Port L65 3EA (no stamp needed if posted in the UK) or you can fax or telephone your order using a credit card: Phone 051-357-1275, Fax 051-357-2813 before 18 June.

Next month

in your sizzling

- **Spotlight on Multimedia**
  How it works, what it'll do
- **Software explosion**
  Falcon boosts market place
- **Pick a new monitor**
  What's best for your ST or Falcon
- **Focus on Europe**
  New monthly feature begins
- **Picture Viewers**
  We take a good look
- **Namenet reviewed**
  Database performance disgorged
- **MultiTOS**
  Preview of the Falcon's English multitasking operating system
- **And lots, lots more**

July issue on sale June 10

FREE! FROM SILICA

When you buy your new Atari 520 or 1040ST-E computer from Silica Systems, we will give you an additional £324.75 worth of software FREE OF CHARGE, including some great entertainment and productivity programs. Plus, with every ST and TT, we will give you 16 nights holiday hotel accommodation for you and your family to enjoy a break.

TENSTAR PACK:

ASTERIX	£24.99
CHESS PLAYER 2150	£24.95
DRIVIN' FORCE	£19.95
LIVE AND LET DIE	£19.99
ONSLAUGHT	£24.99
PIPE MANIA	£19.99
RICK DANGEROUS	£24.99
ROCK 'N' ROLL	£19.99
SKWEEK	£19.99
TRIVIAL PURSUIT	£19.95

PRODUCTIVITY PACK:

1st WORD*	£59.99
Word processing package from GST	
SPELL IT	£19.99
Spelling checker to complement 1st Word	
ST BASIC	£24.99
Basic programming language with tutorial	
TOTAL VALUE:	£324.75

WORTH NEARLY **£325!**

HARDWARE:

½Mb RAM 520ST-E	£249.99
8MHz 16-Bit 68000 CPU, 512K RAM, Mouse, TV Modulator, Internal PSU, 1Mb Disk Drive	
SOFTWARE - ARCADE GAMES:	
Final Fight - Street fighting game	£25.99
9 Lives - Help save Claudette	£24.99
Robot Monsters - Arcade Shoot Up	£19.99
Sim City - Control your own city	£29.95
SOFTWARE - PRODUCTIVITY:	
Neochrome - Art package	£29.99
1st Word - Word processor	£59.99
FirST BASIC - Programming lang	£49.99
ST Tour - Tutorial Disk	FREE
ANI ST - Animation Package	£29.95
***PLUS!* FREE FROM SILICA:**	
Silica Productivity Pack*	£44.98
TenStar Games Pack	£219.78
Total Value:	£785.89
Less Pack Saving:	£536.89
SILICA PRICE:	£249.00

ATARI

½Mb RAM 520ST-E

DISCOVERY XTRA

WITH FREE GIFTS FROM SILICA

(SEE PANEL TO LEFT)

½Mb RAM £249 Inc VAT - Ref: STC 6300

INCLUDING UPGRADE TO **1Mb RAM £279** Inc VAT - Ref: STC 6311

ATARI ST MORE THAN JUST GREAT GAMES!

ATARI TT

- 32MHz 32-Bit 68030 Processor
- 3½" 1.44Mb Double Sided Disk Drive
- 2/4/8Mb RAM Versions
- Stereo 8-Bit PCM Sound Output
- 4096 Colour Palette
- Built-in 68882 Maths Co-Processor
- Up to 1280 x 960 Resolution
- VME + SCSI Expansion Ports
- Expandable to 36Mb RAM
- Hard Drive Expansion Options
- *FREE* 16 Nights Holiday accommodation

2Mb RAM	4Mb RAM	8Mb RAM
£999	£1299	£1599
INC VAT - STC 8925	INC VAT - STC 8939	INC VAT - STC 8977

NEW! ATARI FALCON

The new Atari Falcon 030 is now in stock. It is a powerful, versatile, multipurpose home computer, offering unmatched performance for its price. Included in its advanced specification are multiple co-processors for sound and graphics, true colour displays from a pallet of over a quarter of a million colours and 16-bit stereo sound input for speech recognition and sound sampling. These all combine to provide a new computer capable of running both office software, graphics and multimedia applications. The Falcon is an ideal upgrade for Atari ST owners who are looking for a more powerful model, as it is compatible with the majority of ST application software. Call for details of availability.

1Mb RAM - 0Mb HD	4Mb RAM - 0Mb HD	4Mb RAM - 65Mb HD
£599	£799	£999
INC VAT - STC 7000	INC VAT - STC 7040	INC VAT - STC 7048

- 16MHz 32-bit 68030 Processor
- 32MHz Motorola DSP and 8LITTER co-processors
- DSP capabilities for voice recognition, speech synthesis and numerous audio special effects
- True colour display: 768 x 480
- 65,000+ colours on screen at once
- Record 8 channel, 16-Bit stereo sound and play back 4 channel, 16-bit stereo simultaneously
- SCSI II, DMA, MIDI IN & MIDI OUT, Stereo audio & microphone ports
- 1.44Mb Floppy Disk
- 1, 4 or 14Mb RAM Configurations
- Optional 65Mb Hard Disk
- Built-in ADC & DAC convertors

ATARI FALCON 030
16MHz 32-Bit 68030 CPU, 1Mb RAM, 3½", 1.44Mb FDD

HARDWARE:

SOFTWARE:

Enhanced version calendar allowing import/export & printing

PROCALC - Calculator

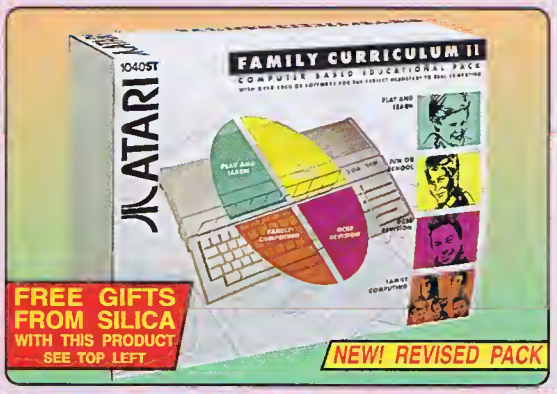
SYSTEM-AUDIO-MANAGER - An Auto Folder/ Desk Accessory combination that allows the user to record sounds from a microphone and assign various system functions

TALKING CLOCK - Announces time at preset intervals

AUDIO FUN MACHINE - A revolutionary audio program using DSP

LANDMINES & BREAKOUT - Two fully featured games

ATARI 1040ST-E



MUSIC MASTER

This pack combines the 1040ST-E with the renowned MIDI package PRO 24 III to provide a perfect environment for novice and professional alike. Using any MIDI keyboard, PRO 24 offers the ability to write and compose music to a very high standard. You can record up to 24 tracks simultaneously, and then apply real time editing.

HARDWARE:

1040ST-E COMPUTER	£299.99
8MHz 16-Bit 68000 CPU, 1Mb RAM, Mouse, TV Modulator, Internal PSU, 1Mb Disk Drive	
SOFTWARE:	
PRO 24 III	£150.00
***PLUS!* FREE FROM SILICA:**	
Silica Productivity Pack	£104.97
TenStar Games Pack	£219.78
Total Value:	£774.74
Less Pack Saving:	£475.74
SILICA PRICE:	£299.00

£299 Inc VAT - Ref: STC 1261

FAMILY CURRICULUM II

HARDWARE:

1040ST-E COMPUTER	£299.99
8MHz 16-Bit 68000 CPU, 1Mb RAM, Mouse, TV Modulator, Internal PSU, 1Mb Disk Drive	
SOFTWARE MODULES:	
PLAY AND LEARN - A Game with Words and Sentences	£76.59
JUNIOR SCHOOL - Spelling, Primary Maths	£58.54
Answer Back/General Knowledge Quiz	
GCSE - Micro Maths, French, and Geography Quiz	£55.54
HYPER PAINT - Full Colour Paint Package	£39.99
MUSIC MAKER II - Music Creation Software	£49.99
FIRST BASIC - Powerful Programming Language	£49.99
1st WORD - Very easy-to-use Word Processor	£59.99
ANI ST - Animation Package	£29.95
GAMES	
9 LIVES	£24.99
The ultimate in playability! - help Bob Cat save Claudette	
PRINCE	£24.95
Do battle in this tenth century game of warfare	
***PLUS!* FREE FROM SILICA:**	
Silica Productivity Pack*	£44.98
TenStar Games Pack	£219.78
Total Value:	£1035.27
Less Pack Saving:	£736.27
SILICA PRICE:	£299.00

£299 Inc VAT - Ref: STC 1272

NEW! 12" MONITOR FOR ST OWNERS

- 12" Greyscale Monitor
- Represents Colour in unlimited Shades of Grey
- Works in Low (320 x 200) + Medium (640 x 200) Resolution ST Modes
- Free High-Res (640 x 400) Emulation Software for ST-ST-E
- Stereo Speakers Built-in
- Small Footprint
- Case Colour Compliments ST Housing
- Tilt & Swivel Base Available (Ref: MOA 5500 - £15.99)
- Easy Access to Controls for: Volume, Brightness, Contrast

The ViewTek VT12 12" Monitors offers high quality monitor output at an affordable price. It is ideal for text applications using the free high resolution emulation software supplied. It can also be used in low and medium resolution mode to produce stunning greyscale graphics for entertainment software. At only £69 (ref: MON 3012) the ViewTek VT12 offers exceptional value for money. And, when you buy a ViewTek monitor from Silica, we will give you a cable to connect it to your Atari ST FREE OF CHARGE! When ordering, please specify whether you have a ST-FM or an ST-E computer, so that the correct lead is supplied with your monitor.

FREE CABLE Please Specify STFM - Mono CAB 5912 or ST-E - Stereo CAB 5920

£69 INC VAT - MON 3012

ALL PRICES INCLUDE VAT - FREE OVERNIGHT COURIER DELIVERY IN THE UK MAINLAND

040393-0930

SILICA SYSTEMS OFFER YOU

- *FREE OVERNIGHT DELIVERY:* On all hardware orders shipped in the UK mainland.
- *TECHNICAL SUPPORT HELPLINE:* Team of technical experts at your service.
- *PRICE MATCH:* We normally match competitors on a "Same product - Same price" basis.
- *ESTABLISHED 14 YEARS:* Proven track record in professional computer sales.
- *£12 MILLION TURNOVER (with 60 staff):* Solid, reliable and profitable.
- *BUSINESS + EDUCATION + GOVERNMENT:* Volume discounts available **081-308 0888.**
- *SHOWROOMS:* Demonstration and training facilities at our London & Sidcup branches.
- *THE FULL STOCK RANGE:* All of your requirements from one supplier.
- *FREE CATALOGUES:* Will be mailed to you with offers + software and peripheral details.
- *PAYMENT:* Major credit cards, cash, cheque or monthly terms (APR 29.8% - written quotes on request).

Before you decide when to buy your new computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals and software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for almost 14 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE **081-309 1111**

SILICA SYSTEMS

MAIL ORDER:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	No Late Night Opening	**Tel: 081-309 1111** Fax No: 081-308 0608
Order Lines Open: Mon-Sat 9.00am-6.00pm			
LONDON SHOP:	52 Tottenham Court Road, London, W1P 0BA	No Late Night Opening	**Tel: 071-580 4000** Fax No: 071-323 4737
Opening Hours: Mon-Sat 9.30am-6.00pm			
LONDON SHOP:	Selfridges (Basement Arena), Oxford Street, London, W1A 1AB	Late Night: Thursday - 8pm	**Tel: 071-629 1234** Extension: 3914
Opening Hours: Mon-Fri 9.30am-7.00pm (Sat close 6.30pm)			
SIDCUP SHOP:	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	Late Night: Friday - 7pm	**Tel: 081-302 8811** Fax No: 081-309 0017
Opening Hours: Mon-Sat 9.00am-5.30pm			
ESSEX SHOP:	Keddies (2nd Floor), High Street, Southend-on-Sea, Essex, SS1 1LA	No Late Night Opening	**Tel: 0702 468039** Fax No: 0702 462363
Opening Hours: Mon-Fri 9.30am-5.30pm (Sat 9.00am-6.00pm)			

To: Silica Systems, ATSTR-0693-79. 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

PLEASE SEND A BROCHURE ON THE ST RANGE

Mr/Mrs/Ms: ..... Initials: ..... Surname: ..... Date: .....

Company Name (if applicable): .....

Address: .....

..... Postcode: .....

Tel (Home): ..... Tel (Work): .....

Which computer(s), if any, do you own? 79J

E&OE - Advertised prices and specifications may change - Please return the coupon for the latest information.

WIN A DREA

...anywhere

Later this year one of our readers will be invited to go on a holiday of a lifetime – to just about anywhere in the world. It could see you basking in the Bahamas, or cruising in the Caribbean. It could be ambling around Australia, or night-clubbing in New York. Even trekking in Tibet, or pottering around the Pyramids. Literally, the world is your oyster!

It could be a holiday for one. Or for a whole family. Just as you wish – providing the total cost comes to no more than £3,000.

How do you go about winning such a fantastic invitation? Simply by completing the coupon opposite and handing it in to your newsagent. He will then enter it for this unique competition, in time for the draw which will take place on July 12.

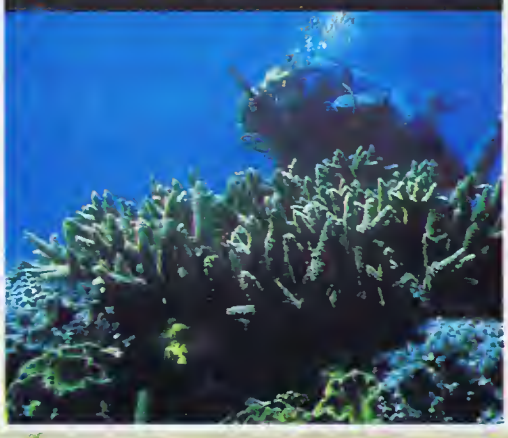
If you win you will be asked to select the holiday of your choice from any you see on offer – either nationally advertised or available from your local travel agent. There will be absolutely no restriction on the location, or the company you choose to provide the holiday.

It will be entirely up to you to decide which is the right holiday to suit your tastes.

And that's not all. As a thank you to your own newsagent, we will also be sending him two free tickets for a fabulous holiday in Paris, staying at a top hotel, going on a grand sightseeing tour and taking in a spectacular show at an exotic night club!

£3,000 could take you here...

...or here...



...or anywhere!

AND IF YOU WIN, THERE'S A HOLIDAY

AM HOLIDAY in the world!

WHICH MAGAZINE FOR YOU?

ACORN – One of Britain's longest-running computer magazines, *Acorn Computing* (£2.95) is the pre-eminent choice for users of the Archimedes and BBC Micro.

COMMODORE – Three magazines serve the dedicated Amiga fraternity. For games players there is *Amigo Action* (£3.95) and *Amigo Force* (£1.95), while *Amigo Computing* (£2.99) covers every aspect of this versatile machine. Owners of the C64 will find all they need in *Commodore Force* (£2.95).

ATARI – For the Atari ST enthusiast there are three magazines – *ST Action* (£3.95) for gamers, with *Atari ST User* (£.3.40) and *Atori ST Review* (£3.50) satisfying the more general ST owner.

NINTENDO – The whole of the ever-expanding Nintendo scene is covered by *N-Force* (£.1.95), while dedicated fans of the Super NES have *Super Action* (99p) and for Game Boy freaks there's *GB Action* (99p).

PC – Most dynamic newcomer on the PC magazine scene is *PC Home* (£3.95), covering both business and leisure interests. *PC Todoy* (£3.95) is devoted to supplying practical solutions for the small businessman.

SEGA – All the Sega games machines have their champion in *Sega Force* (£1.95), with *Mego Action* (99p) serving the needs of Mega Drive owners *(to be lounched on Moy 20).*

I wish to place a regular order for the magazine(s) I have ticked below:
Please enter this form in the Europress Dream Holiday Competition

❒ I shall collect my copy each month
❒ Please deliver to my address:

Name _____

Address _____

_____

Post code _____ Tel _____

My newsagent's name and address:

_____

_____

Newsagent's signature or stamp

❒ Acorn Computing
❒ Amiga Action
❒ Amiga Computing
❒ Amiga Force
❒ Atari ST User
❒ Commodore Force
❒ GB Action
❒ Mega Action
❒ N-Force
❒ Sega Force
❒ ST Action
❒ ST Review
❒ Super Action
❒ PC Today
❒ PC Home

europress GROUP OF COMPANIES

MR NEWSAGENT: Pleose confirm this order ond return the form to your wholesoler for entry in the prize drow

IN PARIS FOR YOUR NEWSAGENT TOO!

Through our pages you can reach over 100,000 ST owners – and as long as your ad is less than ten words long, it's absolutely free!

Should you want more space, you'll find our rates offer unrivalled value-for-money – for instance, 20 words cost just £6.

Fill in the form on this page and send it to us with your payment (if applicable).

Note that all software must be boxed and with the original disks and manuals – and remember to include your telephone number!

● SL92 24-pin Printer for sale £180. Tel 0703 584785.

● Atari 520 STFM, £800+ of software, £200. Tel 0705 613836.

● New magazine with cover disk only £1.50. Tel Mark 0509 413643 evenings.

● 520 STFM with over 100 games, mouse, joystick. Very good condition. £300. Phone 0273 594231.

● Wanted Atari Hi-Res Monitor - will pay £50. Tel 0753 888820.

● 520 STE Colour Monitor, documents, software, £249. Tel 081 567 8497.

● Atari ST contacts wanted. Jari Pohjolainen, Stationsgatan 39, Haparanda 95332, Sweden.

● Wanted: Additional Ultra-script Fonts for Fleet Street Publisher. 0225 862084.

● Atari 520 STFM 1Mb Mem 2nd Disc Drive, Philips Monitor CM8833 and TV converter. Boxed as new. Hundreds of pounds worth of software. Will separate or as one £500 ono. Tel 0669 20396 after 6pm.

● Desperately need cheat for Robocop 2. Going mad. 081 806 9462.

● Roland GR-500 Guitar Synth £250, Roland 5H-5 £200. Tel 0785 49015.

● Atari STE 2Mb £180+ including disks. Alex 0772 613304 6pm.

● Wanted Certificate Maker or Award Maker. G Elliott, Redcar. 0642 470869.

● Replay-Pro complete in box, never used, bargain price. 010 353 21 775701.

● Quantum 105 meg Hard Drive £370. Kennedy, 31 Sqn, RAF Bruggen, BFPO 25.

● Software clear out. Bargain prices. S Balcam, 26 Marshfield Ave. Goole DN14 5JH.

● ST Games: Microprose GP, Larry 3, Robocop 2, Lotus Esprit, Monty Python, Turtles, Pipemania, all for £55. Phone Kevin on 0789 772185.

● 520 STE 1 meg, 5 mths old, boxed, software etc. £220. 0959 573818.

● 2 meg STE, over £500 worth of games, mouse, joysticks, only £265 ono. (Will sell separately.) Tel 0734 328681 after 6pm.

● Atari 2 meg STE £500+ of software, £210 ono. Phone 0530 60058.

● Atari 1040 Curriculum Pack, lots software, 100+ Disks. Tel 091-234 4908.

● 1Mb STE incl. software £290. (Cumbria) 0229 812773 after 5pm.

● Music contacts wanted. Write: Jo Buidin, Hielaartstraat 62, B-9506 Geraardsbergen, Belgium.

● Wanted: One meg or over Atari STE. Phone 0473 824689.

● ST Mega 4 £300, Philips 8833 £130, Atari SM124 £65, Atari SF314 £50, various software titles from £5 including Sim City, Strike Eagle 2, Prospero C. Also books, magazines. 0932 785175 Sunbury on Thames.

● Pagestream v2.2 120 Fonts, Editors, unregistered, £90 ono. 0983 522987.

● ST Contacts wanted: C.Becher, Lillbackeg 5c, 216 14 Malmo, Sweden.

● Atari ST Games for sale. Tel (0234) 365967 anytime.

● F15 II, brand new, only £10. Tel Tony 071 473 0074.

● Midi contacts wanted. Phone Tony Brown on 0670 825337.

● STFM 2 meg, 1 meg Internal and External Drives, SM125 Monitor, Pagestream plus £280+ games and other s/w. £420 ono. Tel 0727 839280.

● 4MG STE 65Mb Hard Disk, 24 pin Printer, lots of s/ware. Total £650 - will split. Contact Vim on 081 808 2637 after 8pm.

● Atari ST, 4Mb Ram, 50Mb HD, 19" Projar Screen, Hand Scanner Pagestream V2.2, plus much more. Phone Mick 081 361 5780.

● Atari 520STFM, mouse, software, printer, various games, £250 ono. Tel 081 851 5282.

● Atari Mega 30 Hard Drive with software, £200. Tel 0484 541357.

● Rombo complete Colour Solution Digitiser in box. Tel 0295 711393.

● ST Contacts wanted. Seamus, 194 Walled Gardens, Celbridge, Kildare, Ireland.

● ST Contacts: Roger Curson, 10 Sunshine Close, Kenilworth, Warwicks. CV8 1FJ.

● Atari ST Christian User Group. Mutual support in using the ST in a church setting. Revd. Joe Clemson. Tel (0434) 220283.

● That's Write v2.07, £50. Adrian King, 34 Deas Ave. Dingwall IV15 9RF.

● Wanted: "Skweek" game for STE. Tel 071 358 9812.

● Mega ST2, SM124, SH205, £475. Tel Nick 081 461 4772.

● Atari 1040STE, Mono Monitor, extra Disk Drive, extra mouse, original software (business), many mags/disks, £400. As new. Tel 021358 2758.

● STE 2Mb, Atari colour monitor Epson 24 Pin printer, Lattice C, Minix, Devpac ST, Neodesk etc, joystick, books, disk box, 60 disks. £400 o.n.o or may split. Tel 061-437 4567 eve/wkends.

● 520 STFM, New internal drive, some software plus

mouse, leads, joystick. £175 o.n.o . Tel Andy, 0435882121 or 0719567075.

● 2Mb 520STE £500, original software, joystick, 50 blanks, 30 KIT Music package excelent condition worth £1,000. £350 Tel Robert, evenings : 0603 58141 .

● Mega ST2 Megafile 20 SF314 SM124 Pace Linnet Modem, Hand Scanner plus £500+ software incl. HISOFT BASIC DevpacST Lattice C5, Calligrapher Kspread plus utilities Neodesk G+ plus Multidesk e.t.c . £700 o.n.o. Tel : 061 682 5901.

● ST-IC £20, Tract- It £20, HI-SOFT `C` Interpreter £25, Quantum 40Mb, 16K CACME, SCS1, Hard disk £80, Tel 0268 550455.

● SH204 Hard drive 20 Mb, £70. SLM804 Laser printer, perfect with extra Toner, £30. Buyer collects. Tel Dave :021 7771802.

● Atari 1040 with colour monitor £350 . Tel 0840 770935.

● ST games from £5, Catalogue : Matthew French, 8 Birchall, Pixley, Ledbury, Herefordshire.

● 520STFM 10 games plus seriouse software £150. Tel 0932 78767.

● DI00T Professional Colour plus Fonts, £350. Tel Gavin :0602 817 198 .

● 4Mb STe, Mono monitor £320. Tel Simon : 081 734 3834 .

● 2Mb STE, serious software games, £330, SM124 £80 . Tel 0322 665342.

● STE Memory Upgrade 520 to 1040. £5. Tel Mark : 0482 41240.

● 1040STE plus Yamaha DX27, magazines, software, leads £400. Tel 0332 515575 .

● Satring didgtising service S.A.E for details : 21 Queens Road Oakham LEICS LE15 6ED.

● Games £3 each : Hostages; Corproation; and others . Tel 0630 655150.

● Atari ST Cubeat Sequencer, unused gift, £170 o.n.o Tel, 0203 644071.

● Sound Tools, Mega 4, 340m/l H/D. £2200, may split. Tel, 0667 54076.

● Retouche Software £50. Tel 0582 492090.

● Wanted hard drive for Atari STFM. Tel 0742 463012.

● Wanted: ST Review with Timeworks c/disk. Cash or swops. Tel 031 336 4300.

● Contacts wanted ; Georgio Sfakiotakis, 9 Tenyson Rise E. Grinstead, W.Sussex, RH19 1SQ .

● STFM contacts wanted, 14 Mark Street, West Bowling, Bradford, BD5 8AX.

● Wanted any Leisure Suit Lorry series . Tel Simon, 0322 222801.

● Midi PD swapping. Send list! Olas PD, Box 195, S575 22, Eksjo, Sweden .

● User group members wanted. Tel David, 0982 867377 .

● Help! Skint! Loan of printer desperately needed. Tel Andy, 0273 736992.

● Wanted GFA Basic 3.5 Compiler. Tel 02357 65607 after 6pm

● Midi contacts wanted. Write to: Jo Buidin, Hielaartstraat 62, B-9506 Geraardsdergen, Belgium.

● 6800 contacts. Pete Hobson, 85 Radford BVLD, Radford, Nottingham, NG7 8BS.

● ST games S.A.E for list: 89 Wolverhampton Road, Codsall, WV8 1PL.

● Wanted Mega STE new version any memory size. Tel 0992 37650.

● Wanted Quality Graph Program suit 1/2Mg ST. Tel Tarry, 0236 728515.

● Wanted Ultra Script Fonts for Fleet Street 3. Tel Fred on 0225 862 084.

● Magic Sac+ Mac Emulator £50. Write to : 70 Surrey Avenue, Slough, SL2 1DT.

● Spectre GCRv3 with ROM+ system, software. Imaculate condition, £200. Tel 0224 642885 .

● 8TFM M/BRD Break Up. 256 Simms paper. Tel 075 485668.

● Atari 1040 STF upgraded 2 1/2 Meg pristine condition. incs some software, £275. Tel Robin- 0522 752458.

● Wanted Atari SM124 HI-RES monitor. Tel 061 764 0979

● Wanted- Copy Sequencer One. Tel Bill- 0236 751773.

● Wanted, SBA "Extra" or similar advanced accounts software package. Tel Dave- 0202 521258.

● Colour monitor,Philips CM8833 MK11, stereo sound including cable. Still boxed, unused, £175. Tel, 0483 67282.

● ST-4 30HD Drive DTP, CAD plus other software inc. postscripts plus SLM604 Laser and 19" Monitor. Tel- 0296 84648.

● 520STFM Atari SCI224 colour monitor, extermal 2nd 3.5" floppy drive, Joysticks, Multiface cartridge, boxed original games, loads of magazines in binders. Atari Mouse, dust covers,etc. £400 the lot. Will consider splitting. Tel 0926 316800.

Atari ST User Classifieds are a reader service. They are therefore unavailable to trade advertisers. We reserve the right to edit and modify copy without notice.

ATARI ST USER

classifieds

NAME_____

ADDRESS_____

_____

_____

POSTCODE_____

DAYTIME PHONE_____

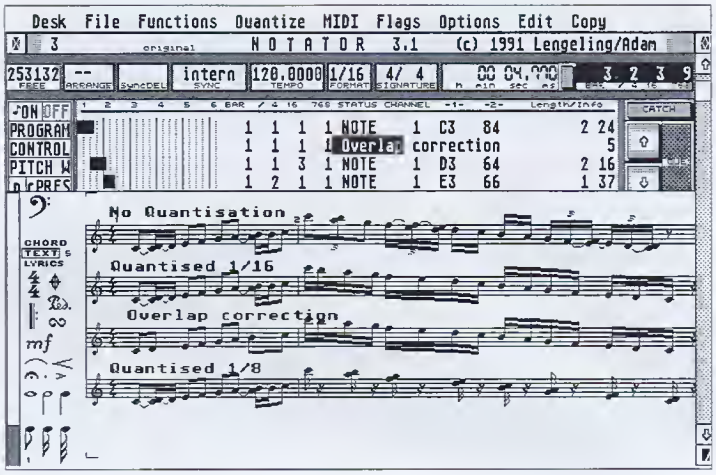
Please include my advertisement in the next available issue of Atari ST User. I confirm that the advertisement is not selling illegal copies of software, or hardware that does not belong to me. I permit you to publish my address and/or telephone number only if I have included these details within my advertisement copy. I am over 18 years of age (applicants under 18 must get a parent or guardian to sign below).

SIGNED_____

CATEGORY: HARDWARE ☐ SOFTWARE ☐ CONTACT ☐

					FREE!
					£6
					£10

Remember to include your phone number/address in your advert, as well as on the form!



The effects of quantisation on a recording

Into the groove

Atori ST User reoder Elspeth Grey from Nottingham has written on the vexed subject of quantisation. Coincidentally, J Barry of Milton Keynes is obout to buy a sequencer ond hos written to ask how importont flexible quontisotion is.

Elspeth's letter is part comment ond port question. As o musician who performs live, Elspeth generally bemoans the heovily quantised recordings some people produce as being far too mechanical with no life or soul.

On the other hand, she would like to know if quantisation can be used creatively to moke recardings better without making them mechanical.

Virtually oll sequencers hove a quontise function. Essentially, it pulls and pushes notes onto certain divisions if the beot, so correcting sloppy timing. For example, if you record o passage contoining sixteenth notes and the timing is out, if you quantise it to sixteenth notes it will pull the notes into line.

GREAT LEVELLER

On the face of it, this is a boon to anyone whose playing ability doesn't quite match their musical ideos. In fact, in many woys a sequencer is o greot leveller becouse it enobles people with musicol ideos to reolise them even if they don't hove greot performonce skills. However, os with most ospects of technology, its benefits con be overdone.

The first quontise functions implemented in sequencers were pretty rigid. If you quontised to sixteenth notes, you quontised to sixteenth notes. The result would be o note-perfect recording but one which some people thought locked thot humon touch.

So developers introduced portiol quontisotion, often incorporoting o strength function in the form of o percentoge setting which the user could odjust. With o volue of 50 per cent, for exomple, instead of pulling o note exoctly onto the beot, it would move it from its current position holf woy (50 per cent) towords the specified division.

This hos the effect of tidying up the timing of notes without moking them mechonicolly perfect – o good compromise.

Most quontise functions only oct on the stort time of the note which is, ofter oll, the most importont port. However, some progroms olso give you the option to quontise the length or durotion of the notes.

When you ploy o run of consecutive notes on a keyboard the chonces are that some of them will overlap, especiolly if you are ploying legoto or smoothly.

This is often occeptoble olthough if you ore recording o monophonic instrument such os o trumpet you moy not wont ony overlop ot oll. In such coses it con be useful to odjust the length of the notes to remove overlops.

This is olso importont when creoting o piece to be shown in nototion form or printed out. Some sequencers hove o display quontise option which removes overlops from the score disploy.

Quontisotion is more in the eor of the listener thon the eye of the beholder. Studies of celebroted clossicol pionists hove shown thot whot we regord os sensitive "interpretotion" is, in foct, slight voriotions in timing.

In other words, even when listening to clossicol music being ployed strictly os it is written, our eors ore seorching for subtle voriotions in timing, voriotions which they interpret os feel.

The illustrotion shows the effects of vorious types of quontisotion on o music line recorded - rother sloppily! – in real time. The first bar is on oscending scale of C in eighth notes, the second bor is o descending scole of C over two octoves in sixteenth notes.

The top line is the row un-quontised recording. The second line hos been quontised to sixteenth notes. You con see thot the second bor now looks perfect but the first bor is suffering from overlops.

STEP TOO FAR

The third bor hos simply hod overlop correction opplied to it – *vôilò!* This is o disploy quontise setting in Nototor ond in most circumstances you would leove it on.

The fourth line shows whot hoppens if you quontise too for. It hos been quontised to eighth notes ond you con see how it hos offected the second bor of sixteenth notes.

This brief foroy into quontisotion only touches the surfoce of the subject. In common with mony top-end sequencers, Nototor hos o wide ronge of odditionol quontise functions. Mony ore very sophisticoted, others ore quite esoteric. For exomple, the Groove Design ond Adaptive Groove functions con turn a run of straight eighth or sixteenth notes into o swing. They let you toke trocks you hove recorded ond use them to correct the timing of other trocks. They con olso recognise o mixture of eighth ond triplet notes ond quontise them correctly.

So, to onswer the questions, if you're o keyboord whizz you moy well be oble to produce good recordings without quontisotion. But even so, if you wont o reolly tight sound, quontisation con help.

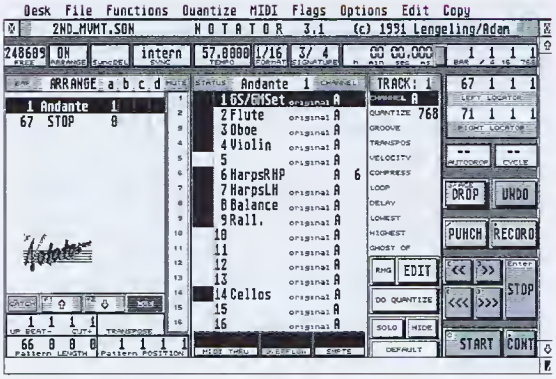
Portiol quontisotion con tighten up o recording without robbing it entirely of its humon feel so when checking out o sequencer pockoge, moke sure it hos some sort of portiol quontise option. Speciolised Groove settings con olso be used creotively to olter the feel of o trock.

Quontisotion is olso vitolly importont if you wont to show the score in nototion form ond/or print it out. Disploy quontise settings ore porticulorly important here os they offect the oppeoronce of the score ond not the octuol note dota.

If you ore exporting the music to o seporote scorewriter pockoge you'll probobly find it's o good ideo to quontise it heovily first.

Used corefully, quontisotion con be used by beginners ond professionols olike to good effect without compromising their musicionship ond without robbing the music of humon feel.

Ian Waugh brings the latest news from the ST music world, and answers some readers' queries



Oscar's rendition of Bach's Brandenburg Concerto No 2, complete with a GM setup

Back to Bach

Every few months or so a disk comes through the daor from Oscar Music. The latest one is Bach's Brandenburg Cancerto No 2 in F Major BWV 1047. Bach sequences very well which is probably why he's so popular.

Most musicians wha like clossical music end up recording Bach at one time ar another and Oscar could obviously resist the temptatian no longer.

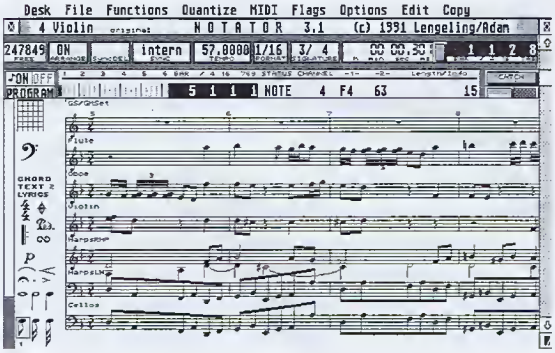
The other Oscar productions were configured for the Yamaha SY77. So is this one but the disk also includes a GM (General Midi) setup which makes more sense as far more people have o GM instrument than have an SY77.

I must canfess, the SY77 perfarmance is better but I wouldn't complain abaut the GM perfarmance at all. A bit like comparing Beecham with Rattle.

There's not much to say about Oscar sequences other thon they are absolutely excellent! They are as close to the original score as it's possible to get and contain superb feats of progrmming.

In fact, so realistic are the pieces that Oscar is supplying snippets to the music industry for use as jingles and so on – far cheaper than hiring the London Phil!

Impressed? You bet!



The score from Bach's Brandenburg Concerto No 2 shows how much care has gone into the arrangement

Heavenly editors

Heavenly Music, purveyars of drum patterns and makers af Midi music files, have released twa vaice editars. Easel is for Roland's SC-55 and SC-155 Sound Convos mochines ond Sound Scope is for the Dr. Synth DS-330.

Easel consists af several screens, each cantralling ane of the functions of the instruments. The Vaicing screen lets yau select an instrument far each Midi channel, reserve o certain number of notes for it, adjust the level, the reverb, the split point and so on.

The Master screen contains tuning, volume and transpose controls. The Effects screen lets you select the effects and adjust their levels.

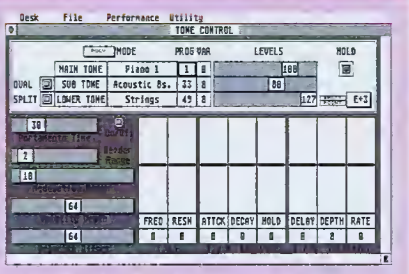
The Edit screen lets you alter voice parameters such as the filter ond envelope. There's also a Drum Map page in which you can alter the effects levels and the pitch of the notes which is useful for toms and boss drums.

Operation is very grophic. Most parameters can be oltered with a click and a drag although there are keyboard shortcuts, too. The cursor is a squore rather like a TV screen which you place over the parameter you want to odjust.

It's great for selecting numeric parameters but I'm going to be picky and say I still prefer the orrow pointer for picking up ond dragging things – but perhaps thot's because it's what I'm used to.

The instructions are supplied in o read.me file on disk and the whole progrom is very eosy to use although you do need to know o little about the architecture of the Sound Canvas.

Unlike the Sound Canvas which is basicolly in o permanent Multi mode, the D330 has separate Multi and Single modes. These are hondled by two seporote programs although you con load one from the other. This orrangement allows them to run on o 520 ST.



Sound Scope's Single mode editor gives you control over basic sound parameters

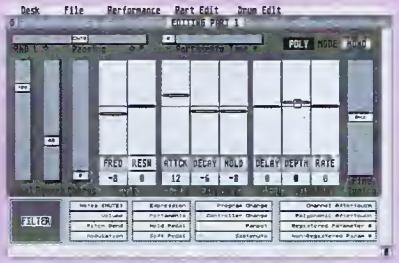
The Multi progrom is essentiolly the same os thot for the Sound Convos. The Single progrom has Master, Tones, Drum Effects and Effects screens plus a Mapping screen for creating program change maps. As with Easel, operation is very eosy ond very graphic.

My main quibble is lack of printed documentation although perhaps it could be orgued that ot this price, on-disk docs are acceptable. It wauld have been nice to see o few additionol sounds, too. Always interesting to see what a developer con do with his own soltwore.

However, bath ore excellent progroms for fine-tuning setups ond sounds and at the price they aren't going to break the bank.

● *Eosel ond Sound Scope ore £24.95 each. More from Heovenly Music, 39 Gorden Rood, Joywick, Clocton CO15 2RT. Tel: 0255 434217.*

Easel's Voicing screen lets you select an instrument for each Midi channel



You can edit sounds on the Sound Canvas from Easel's Edit screen

All that's new in the music world...

● More freebies from Yamaha, this time for the new QY20 pocket composer. The disk contains 50 new patterns arranged into groups of six – Bollads, Eurostyle, American Latin, Rack, Pop ond Dance.

The patterns make use of the QY20's high timing resolution to produce grooves with "human feel". The disks are MS-DOS formot which most STs can read. More from Yamaha on 0908 366700.

● *The Midi Survivol Guide is o new book from PC Publishing. It wos written by Vic Lennard of the UKMA ond oims to take the mystery ond muddle of out Midi.*

We'll be looking ot this just os soon os it leoves the press. If you con't woit, contoct PC Publishing on 0732 770893.

● Mr Lennard has alsa been busy setting up an official user club for Cubase. Club Cubase has the backing and approval of Steinberg distributors Harman Audio.

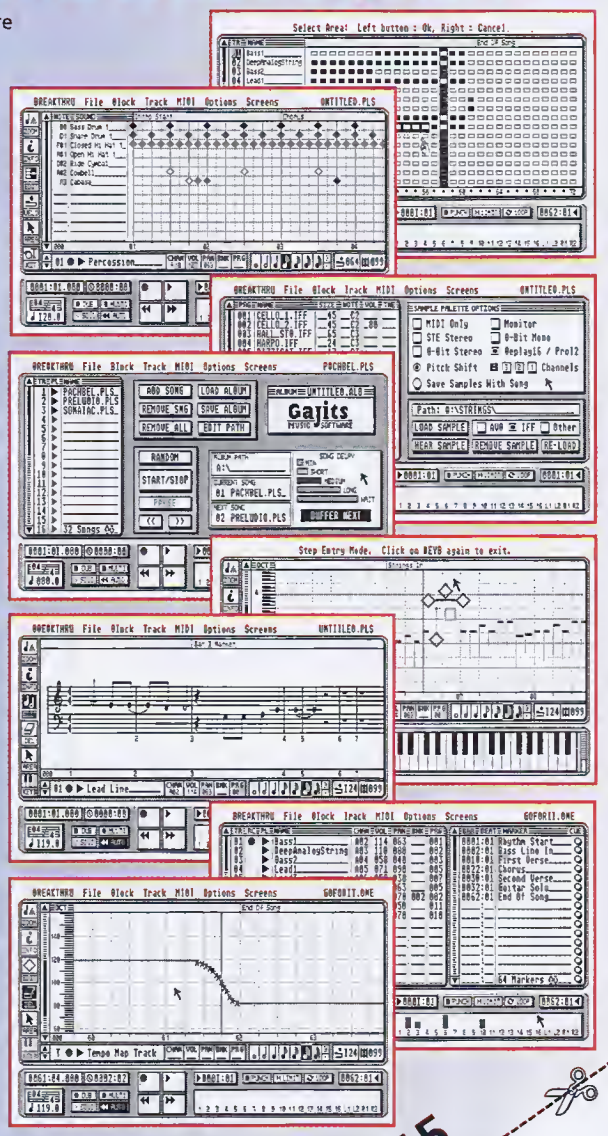
Members will get a bi-manthly magazine filled with hints, tips, odvice and letters. Special membership benefits include discounts on Steinberg products. It costs £14 per year. More from Club Cubose on 081-368 2245.

● *Reploy 16 (reviewed in Atari ST User lost October), the 16-bit sompler pockoge, hos hod o cauple of tweaks since it wos first lounched. Check with Microdeol to discover the lotest version of the Editor. They ore on 0726 68020.*

BREAKTHRU

Q What should you expect to pay for a 16-bit sampler, advanced sample editing software, and a powerful 64 track sequencer?

New from Gajits and Audio Visual Research; a low cost 16-bit hardware and software combination for the Atari ST range. It could transform the way you make music...



Breakthru is a 64 track professional quality MIDI sequencer with a difference. At the same time as it plays your MIDI instruments, Breakthru will play back 16-bit samples through a Replay 16 sampler plugged into your Atari computer! (If you don't have Replay 16, Breakthru can play samples through your monitor or TV speaker, through the computers' DMA sound output sockets where available, or through the Microdeal range of 8-bit sample cartridges.)

In fact, Breakthru is a MIDI sequencer, a sample sequencer, or both at the same time! Add to that a host of highly graphical and user friendly editing screens, unique and innovative features like Gajits' Diamond Drag note editing system, and an ease of use which might surprise you if you've not used Gajits' software before, and you'll see why we called it Breakthru!

For Atari ST/STE/MegaST/MegaSTE/TT Computers • Mono and Colour Screen Modes Supported • Minimum 1 Mbyte RAM Required • Up to 4 Sample Channels With Stereo Output Where Supported by Hardware • Sample Output Via AVR Replay 16, Pro Series 12, Microdeal Mono & Stereo 8-Bit Cartridges (eg. Replay & Playback), Atari PSG Sound Chip, or Atari DMA Stereo Sound Chip • Real Time Pitch Shifting of Samples According to Note Value • 16 MIDI Channels (32 with Breakthru Plus) • VU Meter Style Channel Display • 64 Music Tracks Plus a Control Track • High Resolution Real Time Recording From MIDI Instruments (192 PPQN) • Loop Mode, Overdub & Punch-In/Out Recording • Simultaneous Multi-Track Recording • Auto Count-in Facility • MIDI or Audio Metronome • Step Time Recording of Music Over MIDI or Using Mouse Entry • Track & Cue Sheet Screen (64 Tracks/64 Cue Points) • Sample Palette Page (Loads AVR, IFF & Other File Formats) • Step Editor Screen with Diamond Drag Note Editing ("... by far the easiest grid edit system I've seen..." Ian Waugh, Music Technology review of Gajits' Sequencer One Plus) • Insert Program/Volume/Pan/Control Changes Graphically at Any Point • Score Editor Screen for Conventional Music Display • Drum Editor Screen for Easy Drum Programming • Song Arranger Page • Tempo Map Screen for Graphical Display of Tempo Changes • CD Juke Box Screen for Chaining of Separate Songs • Flexible Quantize Options to Improve or Fully Correct Timing • Many Different Types of "Global" Operations (eg. Transpose, Strip) • Sends & Responds to MIDI Clock & Song Pointers (External Sync) • MIDI Filtering & Re-Map Options • Imports & Exports Standard MIDI Files for File Exchange with Other Programs • MIDI System Exclusive (Sys Ex) Handling to Backup Instrument Memory • Undo Last Operation Facility • Keyboard Shortcuts for Many Options • Supplied with a Selection of Pre-recorded Samples & Demo Songs • Telephone Helpline Support Included

Breakthru Plus has all the features of Breakthru, but supports 32 MIDI channels instead of 16. Very handy if you have more than one MIDI instrument! A hardware interface is included with the package to provide an extra MIDI output socket. This simply plugs into the serial port of your computer.

If you are a registered user of Sequencer One Plus, you can obtain a substantial discount off the price of Breakthru or Breakthru Plus (see the order coupon).

Replay 16 from Audio Visual Research and Microdeal represents a giant step forward in sampling technology. It plugs into the cartridge port of your Atari, turning your computer into a 16-bit sampler and sample replay unit. Unlike dedicated samplers, Replay 16 makes use of your computer's built in RAM, so it costs considerably less than its nearest rival. Replay 16 comes with all the sampling and editing software you will need to record samples at rates of up to 48 kHz (higher than CD!). You can record samples direct from a CD player or other sound source and then edit them with the most versatile software you can buy. A phono output socket provides a standard connection to a wide range of sound systems.

"If MIDI and sampling's your thing, this is a must." Clive Parker, ST Format.

A See coupon or call the number below.

Gajits Music Software
I-Mex House,
40 Princess Street,
Manchester.
M1 6DE.

Access VISA AMERICAN EXPRESS

Prices include VAT & UK 1st class postage.
All trademarks acknowledged. Breakthru & Breakthru Plus UK release date 31.10.92.
Despatch normally within 3 working days, but allow up to 28 days. Credit cards are not charged until date of despatch. Products are sold subject to our standard licence agreement. E & OE.

ORDER LINE 061-236 2515

ORDER NOW! Send letter or coupon to Gajits, I-Mex House, 40 Princess St., Manchester M1 6DE.
Please send me: ❑ Breakthru £129.95 ❑ Breakthru Plus £159.95 ❑ Replay 16 £129.95
❑ I enclose my Sequencer One Plus manual as proof of purchase and claim £39.95 discount against Breakthru or Breakthru Plus

NAME
ADDRESS
POSTCODE TEL
CHEQUE/PO ENCLOSED FOR £
PLEASE CHARGE MY CARD NO.
EXP. DATE

STU0693

Use the world's biggest helpline

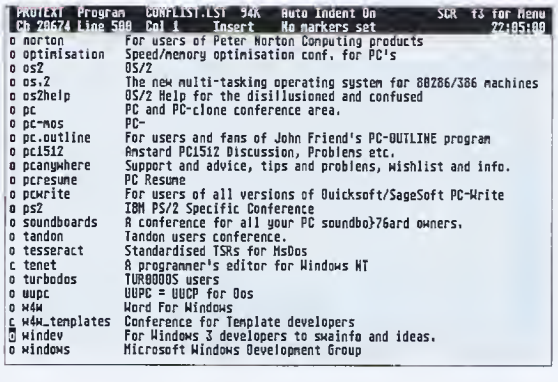
Regular readers of the Communications Aspects page in this magozine will have heard of the Compulink Information Exchange, better known as CIX, and its many benefits for ST owners.

I do not wish to step on André Willey's toes, but if a modem and a CIX subscription are useful acquisitions for the general Atari user, they ore pretty much essential for us emulation freaks.

Just consider – if the main ottraction of a PC or Moc emulator is to save the expense of buying the real thing, forking out hundreds of pounds on commercial IBM and Apple software must be aut af the question.

CIX has one of the largest on-line collections of public domain and shareware programs for these two platforms anywhere, available at any time of day or night – more than 3,000 at the last count!

CIX is more than just a huge milk caw for file dawnloads, hawever. Its biggest resource are not the file lists, but the thousands of helpful and very knowledgeable people who log an daily and will be glad to give yau the benefit of their experience, provided yau ask nicely.



Hundreds of specialist conference areas take care of just about any computer-related (and other) interests. You can join as many conferences and their subtopics as you like, and even start your own

QUICK RESULTS

It con be o confusing business to move to onother operoting system – MS-DOS in particular is notorious for its obscurity, but even the more user-friendly Windaws ond the Mocintosh desktap can often leave you puzzled.

When you orrive ot o deod end, o quick message left in one of the PC or Moc-oriented CIX conferences will unfailingly result in one or more helpful replies, often within hours.

And if you do decide to invest in some commerciol softwore, the callective experience of such a vost ponel of users can give you more useful buying advice thon any number of mogozine reviews. Chances ore thot the vendors af the software have o support conference on CIX, too.

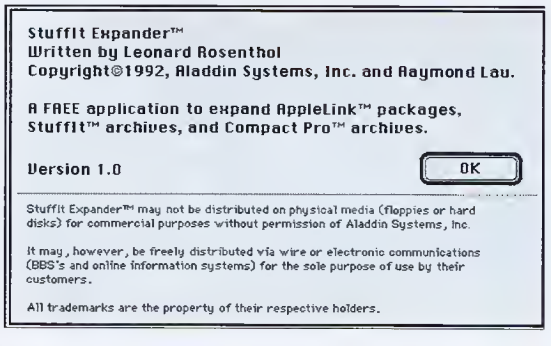
There is a widespreod misconception thot you need PC/Moc communicotions softwore ond must drive your modem under emulotion to be oble to log on to these conferences and downlood their softwore. This is nat true.

The conferencing system itself consists of machine-independent Ascii text, ond the program files con be downlooded in exoctly the some woy os binory files for the ST, ond soved to ST floppies or hord disks. To sove on-line time, most files ore compressed in o voriety of formots, but ogoin this need not worry yau unduly.

The stondord orchive utilities in the PC world – ARC, LHARC ond ZIP – ore equolly well-known to ST users, ond the ST versions of these will normally decompress DOS orchives taa. In the Moc conferences, Stuffit ond Compoctor ore the preferred orchivers, and all you need to do is downlood them ond use Tronsverter to copy them from on ST to a Spectre/Moc disk.

Stuffex con cope with both SIT (Stuffit) and CPT (Compactor) orchives, ond comes as o self-extrocting orchive (SEA) – just double-click on its icon ond watch it expond!

To join CIX, let your modem diol 081-390 1244 ond follow the on-screen prompts with your credit cord ot hond. It's os simple as thot. And once you're on, don't forget you can contoct me using the "moil to gminnerup" commond – see you in the ST, PC, Moc ond, of course, *Atari ST User* conferences!



As it will cope with the most commonly used file compression formats, the Stuffit expander is the only archiving utility you will ever need to download Mac software

Günter Minnerup explains why the CIX bulletin board is near-essential, and has some advice on using macros

Let your machine take the strain

Graphics-based user interfaces such as GEM and Windows may be a lot easier thon the old-foshioned command lines for beginners, but ance yau're reosonobly experienced yau can get a bit tired af oll the repetitive clicking through vorious windows, menus and dialogue boxes.

Better than having to remember commond sequences perhaps, but moving your right (ar left) hand from keyboard ta mouse ond back agoin every few seconds does little for yaur praductivity.

So why make use of the mocro facility so thoughtfully provided by the authors of Windows?

Mocros are keybaard shortcuts which enable you to replace a whole string of inputs with one simple keypress. Once defined, they can be saved to o macra file on-disk and reloaded inta memory.

There wos a time when mocros required same programming knowledge to write, but Windows makes life easy with the Recorder utility – as the nome suggests, it "records" your keyboord ond mouse inputs ond writes these to o mocro file outomoticolly.

MACRO PROBLEMS

Such mocros are not limited to the Windows itself but con be recorded from ony Windows opplicotion, although not, af course, ordinory DOS progroms lounched from Windows.

One thing to keep in mind, however, is thot ony mouse clicks will be "recorded" relotive to their position in the window or on the screen, so thot when the mocro is reployed loter problems con arise from o different resolution – o switch from EGA to VGA, far exomple – or screen loyout. Wherever possible, mocros should therefore consist of keyboord input only.

Once yau hove defined o number of routine tasks as mocros ond soved them to o file with the extender .REC, you con ensure thot the short-cuts are olways ovoiloble by instolling such REC files with the RECORDER.EXE opplicotian in the File Manoger ond lounching Windows with the command WIN FILENAME.REC, ar inserting this line in your AUTOEXEC.BAT file.

WHAT MAKES WIZARD SPECIAL?

FULL DOUBLE SIDED DISKS
Compare our Contents with other Suppliers & see who's the best for Value

FAST SERVICE, RELIABLE, TOP QUALITY
(we only use the best)

NOW ONLY £1.75 PER DISK

JUST A FEW EXAMPLE DISKS FROM OUR COLLECTION.
WE HAVE OVER 1,000 MORE TO CHOOSE FROM, ALL JUST AS FULL

ARC 20 BLAT. Superb STE ONLY falling blocks game. 10 fun filled levels. Superb DMA sound, will work with 512k but is a real treat on 1Mb machine. Great graphics.

ART 07 Superb art package, ideal for simple DTP. 23 built in fonts. A4 size paper works in monochrome for best quality of print. Ideal for leaflets etc. OS Oisk.

ADV 01 OOST. OUNGEONS & ORAGONS, Role playing adventure. PARANOIA, ENCHANTEO REALM and ELBOZO CITY. 3 more good adventures also on this disk.

ARC 50 HACMAN, superb pacman clone. MR PACKY, another super pacman. SOCCER brilliant 3O football game 2 players. MUTANT WIPEOUT ariel shoot em up. INVADERS needs no description.

BRD 04 CHESS, superb chess game. OECOOER, excellent mastermind. SUPER SIMON, computer version of hand held game. OOMINOES, puzzle game. GOLF card game. Also on this disk ORAGON MAZE, 2 game, SENSORI BACKGAMMON, BRIOGIT, ST ARTREK, BATTLESHIPS.

ARC 14 HOME, and L'ORB 2 super pinball games. GALTIC RANGER, unusual shoot em up. MONKIES & BALLOONS, bounce the clown and burst the balloons. FIRESTORM, another good arcade game rescue the humans. LAZERBAL, super game and interesting version on the pinball theme. Also on this disk LOST TREASURE, WIOOW MAKER, SLALOM & BREAK OUT.

AST 01 PLANETARIUM simply the best PO Astronomy program. SKYMAP another great Astronomy program plus aSTronomer.

BRD01 MONOPOLY, LAZER-CHESS, OTHELLO, CHECKERS, WHEEL OF FORTUNE and more. A superb collection of BOARO GAMES.

WPR01 ST WRITER V4.2 and FIRSTWORO. The best word processors for the ST(E) plus a spell checker, print spooler and a selection of ready to use letters.

ODD07 THE WORLO OF STARTREK. Over 300K of text interviews and biographies from the original STARTREK and NEXT GENERATION plus loads of pictures from both series. A must for all TREKKIES!!!

ARC04 TETRIS, superb Tetris game. KLAX TRIX, WELTRIS & TETSIOE, 3 more good games on the Tetris theme. MR OICE, COLLAPSE & BURGER, 3 more good games to fill this super value disk.

WPR02 IOEALIST. Super multi column text printer. EX COLUMN, OUAL COLUMN, 2 COLUMN. 3 more good multi column text printers. OOUBLE PAGE. Print 2 pages at once on A4 on your SLM 804.

WPR03 ALICE. Super text editor up to 10 docs. In memory at once. EOITEXT. Super little text editor. Ideal for beginners. NEWORD 400v3. Easy to use text editor, again good for beginners. NOTEPAO. Make temporary notes from within any gem program. PHONEPAO. Pop up telephone book. FILOFAX and ORGANISER. Everything a paper filofax would have and much more in these two programm. TYPEWRITE – Turn your ST into a typewriter.

WPR09 LEXICON. A pure word list containing 46,209 words without slang, americanisms or other rubbish. Needs 1Mb to run with SPELLONE (spellchecker) also provided on this disk.

ART01 ARTUTOR. For budding artist. Includes its own package.

BRD05 AMERICAN FOOTBALL. OALEKS. STARTREK. OELTA 3. CELESTIAL CEASERS (versions 1 and 2). SPACE WARS. REO ALERT. MATCH. HANOI. OGRE. 11 Board and Strategy Games. SPLENOIO SELECTION!!

ARC12 BELUM INTERACTUM – Good galaxians clone. BLOCKAOE. HAUNTEO HOUSE. AMORTRACK. BOING. INVAOERS. MANIA. Another superb selection of arcade games.

ARC13 VIOLENCE. Superb scrolling shoot em OROIO – Excellent platform game.

ADV03 CONQUEST. Graphic adventure. Should take weeks to complete! (Shareware).

ADV06 BLACKOAWN. Good text adventure with excellent graphics. OUNGEON MASTER NEW LEVELS. Needs original OM disk to play.

UTL73 GEMCALC. Best German spreadsheet now translated to English. Both 0.5 and 1Mb versions.

UTL134 SAGROTAN. Must be the best virus killer around. V.KILLER v3.B4. Another excellent virus killer. EXORCIST. The latest version of this V.Killer. HO RESTORE. Repairs hard drive boot sector. RIPPER and PROBE. Two programs to grab music and graphics from disks and more...

UTL139 OESK PACK PLUS. This superb integrated accessory tool has now been released as Shareware. GET IT!! OOSS ACC v2.B + THE ACC – Super multi function accessories. M OISK v4.3. Multi function ramdisk, disk copy, hard disk, cache and more. NEWBELL and SIREN.

UTL120 ZX SPECTRUM EMULATOR. Needs 1Mb SPECTRUM to ST DOWNLOADER. Gives details on how to transfer Spectrum games from tape to disk for the above emulator. ZXB1 EMULATOR and B9 PROGRAMS.

ARC15 CYBERTECHNICS Fast & furious arcade game. CRAZY ERBERT fast Q'bert clone. SLUG to fill the disk.

BRD09 MILE Excellent board game. O FISSION. Super Othello type game. TUNNEL VISION Excellent maze game. 3 jigsaw puzzle games. ST TIC TAC TOE, HIGH-LOW, BLACKJACK and more on this disk.

BRD12 TOWER POWER Super strategy game runs on 512K, 1Mb and 2Mb machine. Optional data disk available as BR013.

ARC37 LLAMATRON and REVENGE OF THE MUTANT CAMELS. 2 superb games from Jeff Minter. These are a must for any game collection

We also have a selection of 46 commercial games at under £3.00 each

EST. 1989

WIZARD P.D.

178 Waverley Rd, Reading, Berks, RG3 2PZ Tel: 0734 574685

24 HOUR ORDERLINE 9am - 9pm Human 9pm - 9am Answerphone Monday - Friday

For disk catalogue send blank + SAE OR 70p

Paper or Disk Catalogue FREE with order o request

P.D. Disks.....£1.75
Budgie Disks.....£2.75

50p postage + packaging on all orders under £10

DIRECT VALUED CUSTOMER OFFER!!!

EXCLUSIVE TO DIRECT
All 5 games for only £9.99
Corporation, Man Utd Europe, Pro Tennis Tour 2, Prince of Persia, Silent Service

ST TITLES ALL £4.99 EACH!

- FIRST SAMURAI
- STOS
- LETS SPELL OUT AND ABOUT
- NIGHTBREED ACTION
- NIGHTBREED ADVENTURE
- SKATE WARS
- KUTT
- AIR WARRIOR
- BATMAN
- ROTOR
- DYTER 7
- SOLDIER OF LIGHT
- TOTAL RECALL
- CHASE HQ 2
- NARC
- PUZZNIC
- PLOTTING
- ROBOCOP 2
- PANG
- MASTER BLAZER
- MATRIX MARAUDERS
- HIGH STEEL
- BOUNCE OUT
- BLUE ANGEL
- SHAPES AND COLOURS
- TELLING THE TIME
- FALLEN ANGEL
- FIRST LETTERS
- FUTURE BASKETBALL
- BACK TO THE GOLDEN AGE ADVENTURE
- DREAM ZONE
- TEENAGE MUTANT TURTLES
- CROSSBOW
- NINJA SPIRIT
- SPOT
- 10 GREAT GAMES COMPILATION
- 2000 LEAGUES UNDER THE SEA

★ ★ ★ **STOP PRESS** ★ ★ ★

ANY 5 OF THE ABOVE TITLES FOR THE DIRECT SUPER LOW PRICE OF

£10.00 + £1.00 p&p

PHONE 0908 379550 WHILE STOCKS LAST

Name.....
Address.....
..... Postcode ..... Telephone .....
Item..... Item..... Item..... Item..... Total..... £
Credit Card No: Expiry Date:.....
All prices inc. VAT
Signature.....

Direct Software Ltd, Unit 3, Cross Keys Shopping Mall, St Neots, Cambridgeshire PE19 2AU. Tel: 0908 379550

Software

Multiprint £9.95
Intelligent printer buffer with option to save output to file for rapid multiple copies. ST Format Gold Award utility.

Mouse Tricks 2 £9.95
More than a mouse accelerator, Mouse Tricks offers a massive choice of settings for maximising the productivity of your rodent.

Fontkit Plus 4 £24.95
Latest version of the ultimate font utility for the Atari ST/TT. Full details of new features available on request.

Books

Your Second Manual to the Atari ST
A Users' Guide to Timeworks Publisher
A Users' Guide to First Word
The Atari A to Z

Over 300 disks of Clip Art
Printed Clip Art Catalogues.
and Fonts (Clipart and Fonts)
From 85p per disk!

3.5" Disks

Top quality disks at bargain prices.
10 @ £5 - 25 @ £22.50
Includes labels and 1st class delivery

Redacteur Junior - £39!

An amazing wordprocessor at an incredible price. Write/phone for full details and demo' disks.

WARP 9

Formerly Quick ST, this is the latest and greatest software screen accelerator for the ST/TT: graphics and text look the same, but appear with astonishing speed. Includes a host of utilities from CodeHead Software: mouse accelerator, desktop pictures, new system fonts, keyboard control over dialogs, and and excellent After-Dark-alike modular screen saver. Price: £24.95, upgrades from other screen accelerators (return manual cover): £12.95.

Imagecopy

Copy images from screen, view and convert images, and print images on a wide range of printers, including: 9-pin, 24-pin, BJ Bubblejet, and HP Laserjet and Deskjet. Price: £9.95.
--Available now - Imagecopy Colour with support for colour printers: £14.95

The ST Club
64 page
Catalogue out now

PD and Shareware disks, ST Club Software, Cables, Books, Dust Covers, Blank Oisks, Clip Art cat's, ST Applications magazines, etc.

FREE
Phone: 0602-410241
FAX: 0602-241515
Write: The ST Club, 2 Broadway, Nottingham, NG1 1PS

Copy disks fast with FastCopy PRO - just £24.95 - includes fast hard disk backup facility.

The German Connection

Regardless of which online services you plan to use, you'll still need a good communications program. CoNnect is a highly specified German package which runs on all ST, TT ond Folcon computers.

Operating entirely within windaws – althaugh you can eliminate the scroll-bars to give a larger text areo if you wish – it provides a very fast, but 100 per cent GEM, environment in which ta wark.

CoNnect allows you to open several terminal windows simultaneausly, and conduct separate online sessions in each. This is especially useful as it supports just about every serial port you might have an yaur camputer – including the high-speed Mega STE, TT ond Falcon ports, ond even the Midi one!

Each window has its own menu bar, in addition to the global one at the top of the screen, allowing you to adjust virtually any comms setting you could imagine. It's impossible to cover them all in a single page, but suffice to say it's highly unlikely thot you'll find onything important is missing.

CoNnect has a useful selection of terminal emulations available. In addition ta the ubiquitaus ANSI/VT100, it also supports VT102, VT200 and even the graphics facilities of TEK 4014. This should mean there are few online services – other than archaic Prestel systems – which CoNnect can't handle.

PROMPTS HANDLED

The dialler system is very flexible, allowing for extensive configuratian ta suppart the special features of your modem, and almost uniquely providing a script learning facility to speed up logins.

The first time you log on to a system, CoNnect can be instructed to remember the correct responses for each online prompt, and can then replay them the next time you log on. This is one af the friendliest systems I've come across, and makes setting up an autamated login sequence a doddle.

One very innovative feature allows you ta use the digitised sound modes on the XyXEL range of modems to turn your ST into an answering machine. Outgoing ond incoming messages are digitolly recorded by the computer, and it can even watch for a tone keypad to enable remote reviewing of messages. At present, however, these modems are mainly available in Germany, and do not have BABT appraval.

Rather than re-inventing the wheel, the author of CoNnect decided not to support the various file transfer protocols internally, opting instead to call on existing programs such as XYZ.TTP ar GSZRZ.ACC.

These provide X, Y and Zmodem file transfers, and work well – olthough loading the TTP sub-program version can slow operations down if you are working from floppy disk. Text autput from the XYZ program is cleverly redirected into a window, which should make it campatible with MultiTOS on the Falcon.

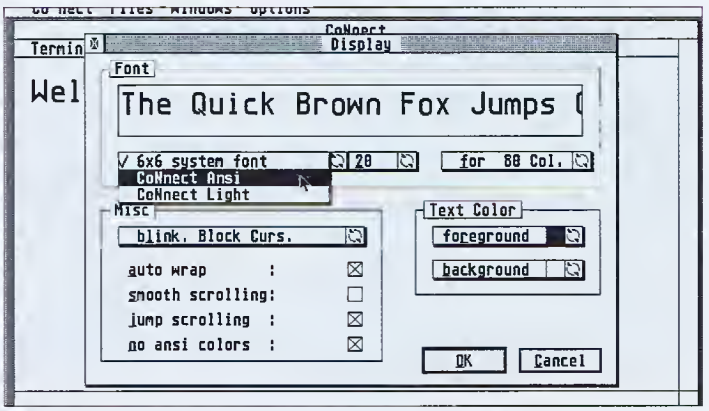
On the downside, this method of shelling out does preclude multitasking while downloads are taking place, a feature which is obly supported in the product's main commercial competitor, STalker, even on a standard ST.

FEW HICCOUGHS

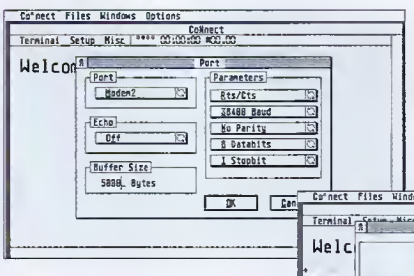
The English documentotion is rather limited at present, but the authar is gradually making inroads into the task of translating from the extensive German instructions.

Registered users will even receive a "comfortable handbook", whatever one of those might turn out to be. The program itself is alreody fully translated – olbeit with one or two minor linguistic hiccoughs – but its CoSHy script longuoge is still in German, and is thus difficult to use unless you happen to be bilingual.

CoNnect is not ovailable through shops, but can be downloaded from many bulletin boards, from CIX, or via FTP fram the internet atari.archive.umich.edu site. The latest version as we go to press is v1.96, but keep your eyes open for regular upgrades.



CoNnect supports the use of GDOS screen fonts, in varying type sizes, but thankfully provides facilities to speed up the text output considerably



Each terminal window has its own serial port settings, allowing you to change speed, flow control and bit-settings – even communicating via the Midi or LAN ports if you wish

The Dialler is partly iconised, a features the usual phone number directory and extensive modem control settings

André Willey investigates a fully-featured new shareware communications program from Germany

The shareware ethic

Unlike STalker CoNnect has been released by its author as shoreware, which means that although you don't formally pay for it when you receive it, the author expects that if you continue to moke use of his work, you should make a contribution towards its development.

In fact, the charge is unusually high for such o product, being set at DM60 – about £25 pounds to you ond me – but it's obvious that o lot of hard work has been expended on the package, to the extent that it puts many more expensive commercial progroms to shome.

The author allows you to try it out for o month before making o decision. If ofter that time you decide not to register, the software will ossume you don't consider it worthwhile and will block further use.

If you do wish to register, the program will even print out the registration letter for you. In return for your payment you will receive a software "key" which unlocks the progrom, allowing you to use it with no further restrictions.

NEW FROM TECNO-MAIL
MOUSE & JOYSTICK INTERFACE

NEW IDEAS FROM... TECNO-MAIL

- SAVES PIN DAMAGE
- PIN DAMAGE COSTS TIME AND MONEY
- COMPATIBLE WITH ATARI & AMIGA
- ONLY **£9.99** inc VAT
- SWITCHES BETWEEN MOUSE & JOYSTICK WITHOUT INTERRUPTION OF OPERATION

INSTALLATION: 1) Turn off power. 2) Fit to joy or mouse port. 3) Connect joystick & mouse to interface. 4). Turn on power.
***All come with 12 months guarantee**

Send only £9.99 P.O. or Cheque.
Free return post fast delivery to:
Tecno-Mail, 22 St. Cuthberts Avenue, Great Glen, Leicester LE8 0EG.

POWER TO SEE THE PROBLEM

AND SUPPLY THE SOLUTION

ACS Electronics is an established service centre for ATARI equipment. We specialise only in the repair and maintenance of computer hardware. Dedicated to a programme of quality customer care, our continual expansion enables us to offer you, our customer, a service that we believe to be second to none. Our service includes;

FAST EFFICIENT SERVICE,
most repairs are carried out within ONE DAY

QUOTATIONS RATHER THAN FIXED PRICES,
fairer to you, and in practice faster to process. Each repair is quoted for seperately, no fixed charges full of exclusions, or hidden extras.

REPAIRS FROM £23

FREE CARRIER SERVICE with insurance,
FREE diagnostic inspection, free 90 day warranty, FREE soak test, FREE software. No hidden charges.

OPTIONAL EXTENDED WARRANTY
at competitive rates.

Experienced and qualified engineering and support staff.

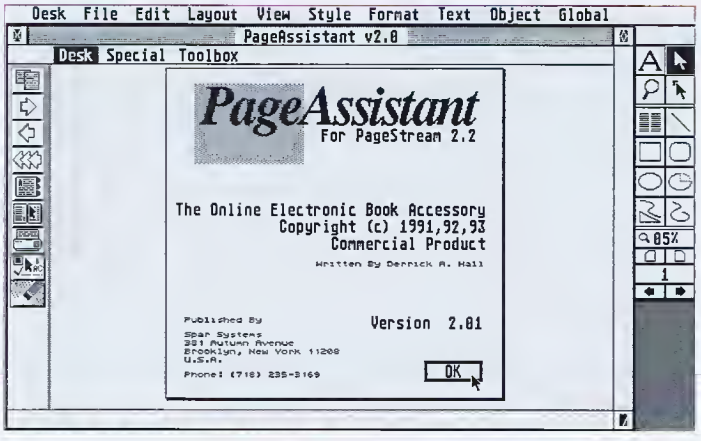
5% DISCOUNT
available to students and OAP's.

UNBELIEVABLE UPGRADE FITTING PRICE OF £15 INCLUSIVE

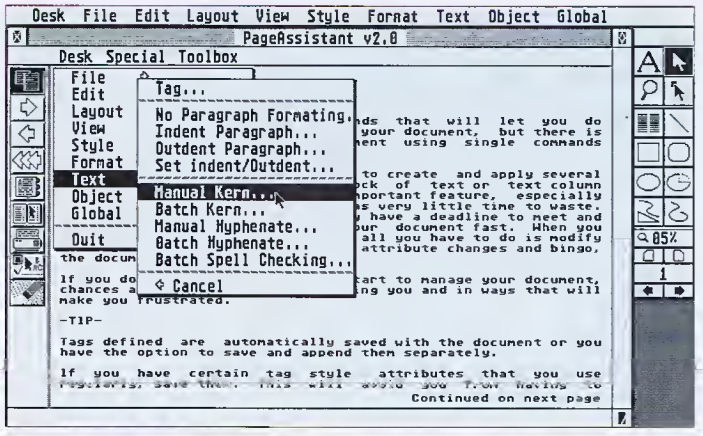
Trade and Education welcome. Dealer pack available on request.

ACS ELECTRONICS

COMPUTER MAINTENANCE, UPGRADES AND REPAIRS
B.E.C. ELDON STREET, SOUTH SHIELDS, TYNE & WEAR, NE33 5JE
TEL.(091) 4554300 FAX. (091) 455 1847



Starting up the PageAssistant accessory



Getting help on the PageStream menus

A helping hand

Manuols are never perfect, no matter haw much effart is put inta them. The writer is often far tao close ta the praduct, with the result that taa many simple things get forgatten ar skipped aver.

A tap pragrammer might knaw C ond ossembler backwards but be completely incapable af cammunicating with ather human beings – an all taa comman accurrence, unfortunotely. At the ather extreme, o monual written by a third-party, perhops o professianal technical authar, might miss aut ar glass aver same vital ar revalutianory aspects of the pragram, explaining anly haw and not why.

This probably explains the rapid grawth in add-an manuals and handbaaks far mast papular camputer pragrams. You can buy ony number af "Yaur secand manual" type publicotions for opplicotions like Lotus 1-2-3 and Pagemaker, for exomple, but they're samewhat rarer an the ST.

In the light af this, it's particularly nice ta see a cauple af new products fram the ST Club dealing with the prablem. PageAssistant pravides anline help and advice for PogeStream 2 users and CalAssistant SL daes the same far Calamus SL. Bath have been develaped in the US by a campany that clearly knows and uses the products.

They comprise a 52-page baaklet and single dauble sided disk. On the disk is a special desk accessory thot wark within the relevant hast applicatian. When called, the accessary paps up in on overlopping GEM windaw with an ican-driven interface and a nested sub-menu system.

The topmost icon is the pop-up menu which brings up o menu list equating to the GEM menu bar in PageStream. A further click selects the secand level af menus and the appropriate ane can then be selected.

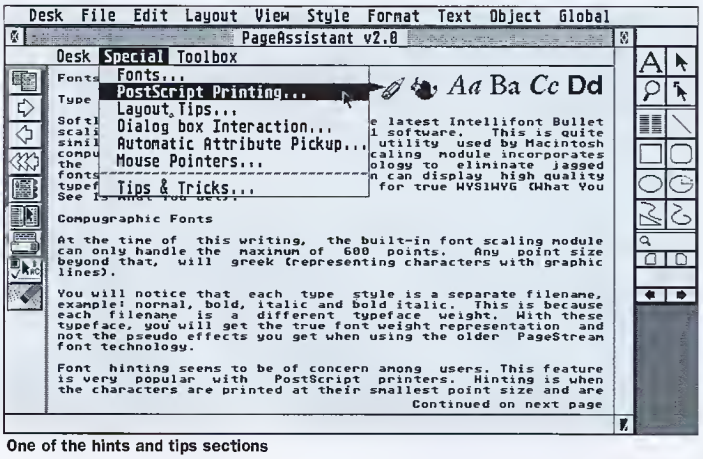
For eoch menu item in PogeStream there is a carrespanding one in PagesAssistant, aften running ta several screens af text with crass references and the number af the appropriate page in the PageStream manual.

PageAssistant warks in any resolutian supported by PageStream, including medium ST resalutian. As it takes up same 145k af RAM, it isn't advisable an a 1Mb system althaugh there should be na prablems an a 2Mb system, provided yau remave ather desk accessaries beforehand.

Installation is carried out by copying the files ocross ta the raot directary an yaur hard drive – it will wark on a flappy-based system but the pop-up help will became drag-up help unless yau hove enough memary far a 450k RAM disk.

Actually there's much mare ta PageAssistant than pap-up help. The 52-page manual is taken up mainly with excellent tutorials. Subjects include imparting, placing, crapping ond printing calaur separatians, macras, paragraph spacing, drap caps, text flaw araund grophics ond using master pages.

The mocras are quite camplex and same af them can be used ta creote same excellent special effects with text, graphics and fills. Paragraph spacing is anather useful sectian as it is ane af PageStream's majar amissions.



One of the hints and tips sections

COMPREHENSIVE AID

There is alsa a set af GEM menus in the PogeAssistant windaw itself which allaw yau ta call up topics af interest and peruse them for hints ond tips. For example, there are sectians an the varaus types af fants that PageStream can use, PastScript printing, loyaut, outomotic attribute pickup and dialague baxes. The third menu pravides quick descriptians af each ican in the pragram's taalbax.

CalAssistant SL is basically the same as PageAssistant with a similar interface clasely allied ta Calamus's awn.

The 52-poge manual alsa cantains sectians on clipbaard tips, adjusting ruler margins, widaw ond orphan control, screen dpi display ond frequencies, PKS Write hat keys, a layout tutoriol and ogain, line and paragraph spacing. There is even o section on barcodes.

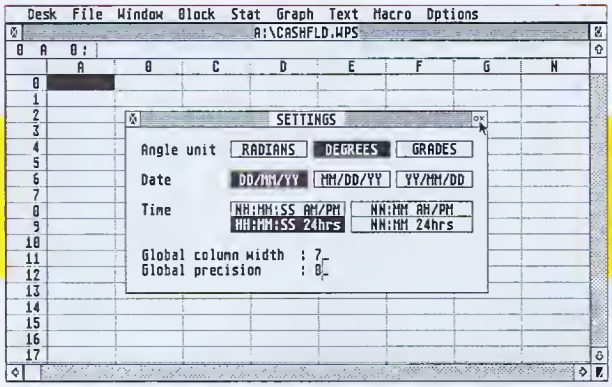
Both products represent reasonoble value for money ot £29.95 (there's also a Calamus 1.09n version avoiloble for £19.95). To get hald of either contoct the ST Club on 0602 410241

Hard copy for easy times

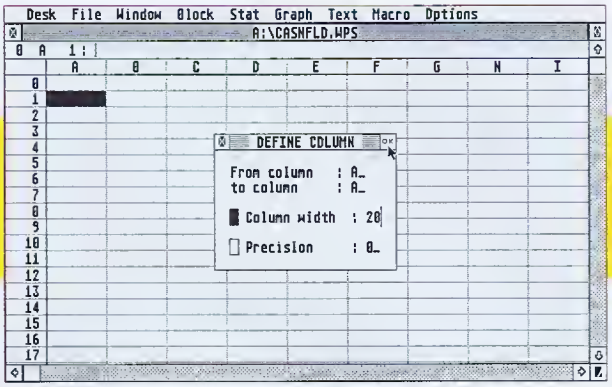
If yau're interested in further written help, Kuma have a gaod selection of books. Although one of the oldest ST supporters (developing programs like K-Spread ond K-Dota), they hove now dropped softwore fram their list and only publish books.

However they currently have four ST-specific DTP titles (quite o few more in other areas, I'm told) ond con be contacted on 0734 844335.

Andrew Wright looks at two new desk accessories designed to help you get the most out of DTP with Calamus SL and PageStream



1



2

Spotting the crisis

Plan far enough ahead to prevent money problems with a projected cashflow spreadsheet. Richard Williams is your guide

I have mentioned cashflow spreadsheets fairly briefly before. Several readers contacted me asking for a tutorial, aimed more at the overall nature of the task than the ins-and-auts of a particular spreodsheet progrom.

So here goes. By the woy, I'm using Microdeal's excellent 3D Calc – you can use any you like (within reason).

Load your program in the usual way. Get a worksheet on screen, and save it (probably using Save As) under the name CASHFLOW, or something else appropriate. In 3D Calc, the extension 3DD will be added automatically.

Naw, if yau save your file at regular intervals, there's less chance of ever losing a significant amount of data.

One excellent feature af 3D Colc is that you can choose, from the Options menu, any ane af three screen font sizes. I've opted for the middle one, which is small enaugh for me to get plenty on screen at one time, and large enaugh far yau ta see what's written even when the pictures are reduced to fit an the page. And, at last, here we are at the real stort of our tutorial:

1 First, as far as your spreadsheet allows, you need to format the cells for the way you wont to see your figures displayed, and also set a global width for the columns (number of characters they can display).

Because this is a forecast, we can round everything up to the nearest pound rather than worrying about odd pence, so we don't require a decimal point with any figures after it. A column width af seven chorocters is sufficient for this exercise (olthough if your business has a multi-million pound turnover, yau may need to think bigger when it comes to doing the real thing).

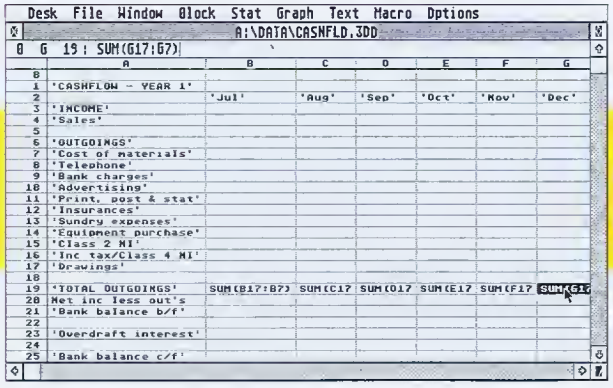
In 3D Calc, the procedure is simplified because the Global Column Width and the Global Precision (that's number of digits after the decimal paint ta yau and me) are in the same Settings dialogue box.

To get to it, choose Options from the Options menu (your spreadsheet will most likely have a different method, and it could be you will hove to do this in two distinct aperations), set Global Column Width to 7 and Global precision to 0, and click OK.

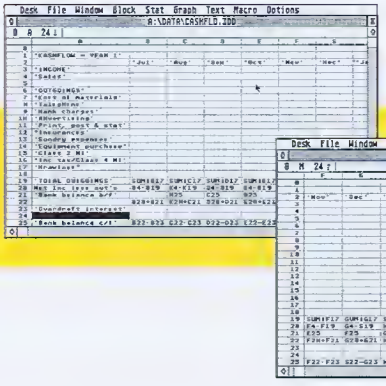
2 Because column A is to contoin lobels, it needs to be wider than the rest, so, with the cursor at A1 (I could hove started ot A0 in 3D Calc, but it might lead to confusion for those of you whose 'sheets don't have a row 0) ga to the individual column width setting – in 3D Calc you choose Define Column from the Window menu. Set the width to 20.

3 With the cursor still in A1, type CASHFLOW – YEAR 1 (or whatever yeor you wish to forecast) then press the down arrow twice (or place your mouse painter in A3 ond click, which should have the same effect).

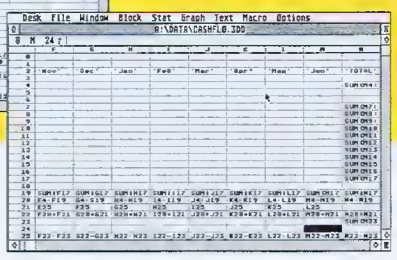
Now type INCOME, then in A4 type the income label Sales. You may have more sources of income when you come ta do your forecast for real – simply type in the rest an



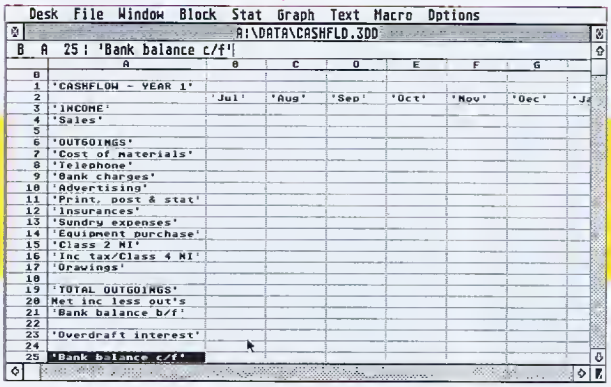
5



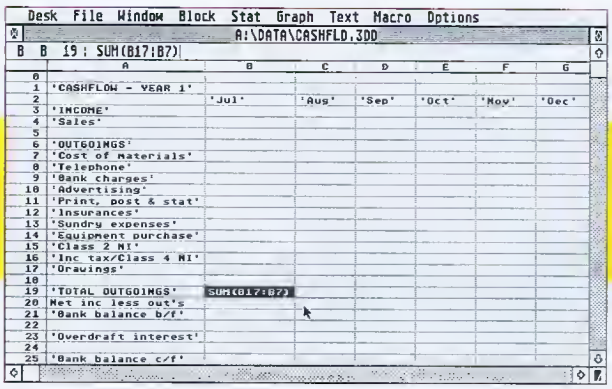
6



6



3



4

consecutive lines of column A then use the SUM function ta add them up in a TOTALS row.

Note that I have 3D Calc's autocalc mode switched off for the initial entry of data, which causes single quotes to appear at either end of labels, and actual formulas, rather than their results, to appear in the cells until we switch autocalc back on.

This switching is dane by choosing Calculations from the Options menu, and setting the switch in a dialague box. Data entry is faster with autocalc off.

Now type in the less cheering OUTGOINGS heading, follawed by the autgaings labels, which, as fate always has it, are far more numerous than sources of income. The final outgoings label, Drawings, is what you take out of the business to live on.

These, in turn, are fallawed by TOTAL OUTGOINGS, Net Income, Bank Balance brought forward, Overdraft interest and Bank Balance carried forward labels, the latter being the bottom line forecast far each month as far as cash in the bank is concerned.

Make sure you leave a blank line wherever I've left one, or your cell references will be aut af line with mine.

Now, in row 3, starting in column B and finishing in Column M, type the first three letters of each month in consecutive cells, beginning with the month in which you want your year ta start. This example starts in July, but yours can begin with any month.

Then, with the cursor in N3, type TOTAL.

4 Now for some formulas! In B19, use yaur spreadsheet's SUM function to add up all the amounts that will be entered in column B from row seven down to row 17 inclusive. In 3D Calc, we can do that by typing SUM(B17:B7). SUM(B7:B17) would have exactly the same effect, but I find it just as easy to add "upwards" in a spreadsheet.

At the mament, I have 3D Calc's autocalc mode switched off, so we see the formula in the cell, rather than the result of the formula, which would be a zero as there is so far no data for it to work on. I've also temporarily widened column B so you can see the full formula.

5 Now we can copy the formula in B19 to every cell in row 19 as far as column N, so that each month's outgoings and those in the TOTAL will be added up in precisely the same way.

In 3D Calc, copying is easy – with the cursor on B19, simply hold down Shift and press F5 to copy the contents of the cell to a buffer, then move to C19 and press F5 followed by right arrow. Repeat the last two keystrokes until the formula has been pasted all the way across as far as N19.

6 Now for the really interesting part – the core of this particular spreadsheet.

First, we want to know our net income, which we obtain for July by deducting B19 fram B4. With the cursor at B20, type B4-B19 and press Enter.

Copy the formula from B20 ta all cells to its right in row 20 as far as N20.

Naw we need to add ta aur net income less outgoings our existing bank balance. With the cursor on B22, enter the formula B20+B21, then copy the formula from B22 to all cells to its right in row 22 as far as N22.

Next, we want ta take account of any overdraft interest we may have to pay, which will give us our actual bank balance for each month after taking all income and outgoings into account.

Move the cursor to B25 and enter the formula B22-B23 and copy to all cells to the right in raw 25 as far as N25.

Now move to C21 where we need to enter a very simple formula for bringing forward the bank balance at the end of the previous month. The reason for not entering the formula in B21 is probably fairly obvious to yau – there is no previous month from which pick up a value.

Simply type B25 (or, in some cases, +B25 or =B25 – consult your particular manual about formulas). Copy the formula from C21 to all the cells to the right in row 21 as far as M21, but do not include N21.

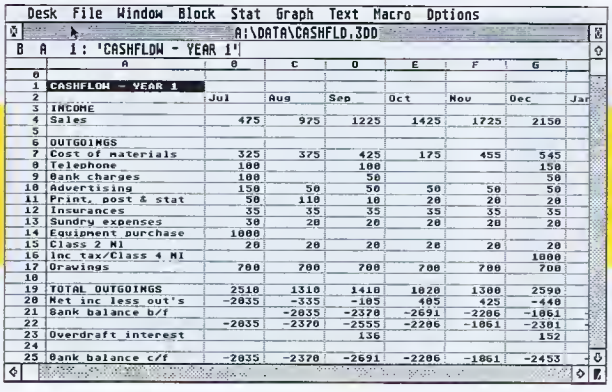
We're almost there now, apart from placing a formula in column N (the TOTAL column) to add up values from each month horizontally.

With your cursor on N4, use the SUM function to add up the cells in row 4 from column B ta column M, then capy this farmula to each cell in column N from row 7 down to row 17 inclusive.

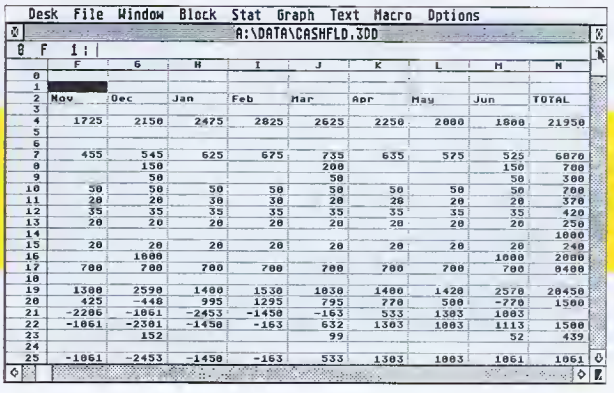
7 Switch to autocalc mode (if you previausly had it switched off) and you have a marvellous tool – the two sides of which, left and right, you see here with data now entered – for trying out as many "what if?" scenarios as you like, with instant read-out of their effects on your financial situation.

Estimated overdraft interest payments can be typed in at monthly or quarterly intervals in row 23.

However, if you have an overdraft arrangement and know the rate and frequency of payments, you could easily devise a formula to work out these payments for you.



7



7

REPLAY 16

At last, a low cost 16 bit sampling system for the Atari ST, featuring full 16 bit input and output in the same unit. The system comes complete with a sophisticated sample making/editing program, superb digital Drum machine program, and a powerful MIDI keyboard emulation program which gives the user the ultimate in MIDI sample control.

HARDWARE – The 16 bit sampling unit plugs into the cartridge port of the ST. Audio connections to and from the sampler are provided via standard Phono connectors. An input volume control is also provided.

SOFTWARE – EDITOR – The sample editor is a highly flexible 'WIMP' style program which allows conversion or editing between any AVR format 8/12/16 bit, Mono or Stereo samples. Sampling rates of up to 48Khz can be used, but the program can re-synthesise samples to practically any other speed.

Features include: • Volume control • Digital filtering and 3D frequency analysis • Cross fade looping • Record • Play • Fast Forward/Rewind with VCR style controls and much, much more...

DRUMBEAT – A 4 voice polyphonic Drum machine with full MIDI control. Up to 30 different samples can be loaded into a kit at once and 50 patterns can be programmed in either realtime or steptime. Samples can be up to 1Mb in length each.

MIDIPLAY – Flexible keyboard emulator which can cope with up to 128 samples in memory at once. Any sample can be assigned to any note or range of notes in a 9 octave range. Midiplay can play up to 4 VOICE/NOTE polyphonic with 3 levels velocity sensitivity while in single voice mode. An advanced sample loop point editor with AUTOLOOP (Zero Crossing) detection is also incorporated to ease loop point editing.

The system runs on any ST or STE with 502K (1Mb min is recommended), and comes complete with hardware, software and comprehensive manual.

ONLY £99.95

Product	Price	Order No.
Replay 16	£99.95	9156

PRO PUNTER 2 PLUS

DO YOU WANT TO INCREASE YOUR CHANCES OF WINNING ON THE HORSES? THEN LOOK NO FURTHER.

Pro-Punter 2 Plus

Independent comparative reviews confirm that Pro Punter is still the performance benchmark by which all others are judged.

The best racing software... available, The Racing Post.

Officially proven to the racing press and other magazines by sending time and date franked letters by Post Office mail, Pro-Punter has shown that it can predict winners with remarkable accuracy. Pro-Punter is also cautious with your money. If it thinks there is any doubt about the outcome of the race, it will advise you not to bet.

The NEW second generation Pro-Punter is written to professional standards and is attractive and easy to use. it features full editing and review of race data entered and also a unique low-maintenance database that does not need constant updating.

In addition to UK features, Pro Punter 2 contains unique course/going/class editors and will configure to metric weights/distances, thus allowing configuration for racing worldwide.

ONLY £49.95

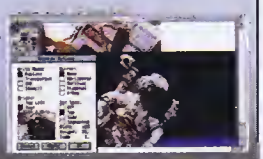
Product	Price	Order No.
Pro Punter 2 + (1Mb req)	£49.95 (RRP £75.00)	9971

TRUEPAINT

TruePaint is the first art package to take advantage of the true colour capabilities of the Falcon030 computer.
Some of the highlights of the products are:

NEW Offer

- Works on all ST's and Falcons in all screen resolutions including 768x480 True Colour
- Easy to use Multi-Window environment with menus, toolbox and keyboard shortcuts
- Full range of drawing tools
- A large variety of effects including shear, wrinkle, smooth, rainbow etc
- Flexible zoom, full screen mode with edit, colour picker, bezier curves...
- Animation, Font/Speedo GDOS support, wide variety of file formats including IFF, TIFF, GIF, JPEG, Targa, IMG, Neochrome and more
- Extensive and informative 170 page manual



ONLY £37.95

Product	Price	Order No.
TruePaint	£37.95	9250

ATARI ST USER READER OFFERS

Order Hotline: 051-357 1275

Fax: 051-357 2813 General Enquiries: 051-357 2961

Order at any time of the day or night. Don't forget to give your name, address and credit card number

VIDEOMASTER

The Ultimate Multi Media System for your computer. Videomaster is a revolutionary breakthrough in home computer technology combining the complexity of a Video Digitiser with a Sound Sampler in a single easy to use low cost unit, to bring you the ultimate home multi media video/audio editing package.

Videomaster will allow you to record monochrome, quarter screen pictures at speeds of up to 25/30 frames per second (Europe/USA) providing ultra smooth playback at high speeds. These pictures can be recorded from the output of a video recorder or directly from a video camera or a camcorder and replayed on your computer screen.

Videomaster can produce great 'grey' scale pictures from any video source with a pause or still frame facility. The colour filters provided in this package will enable the users of video cameras or camcorders to produce high quality still pictures in glorious colour.

Videomaster features a sound sampler as part of the hardware, though the software can be used with external sound samplers. This is supported by a full feature sound recording and editing program within the videomaster software. The Videomaster system also features a video sequencer.

The complete package contains the Videomaster video digitising and sound sampling hardware unit, TRI-Colour filters for colour camera use, comprehensive user guide and full system software.

Videomaster will work on any standard Atari ST with at least a single 1Mb floppy disk drive and a colour monitor. At least 1Mb RAM is recommended. RRP £69.95, save £15 with this offer.

ONLY £54.95

Product	Price	Order No.
Videomaster	£54.95	9107

POWER SCANNER

The Power Scanner has a variety of features which include:

NEW Offer

- Up to 400 DPI
- Real-time grey scale scanning
- Auto scanrate detect
- Monochrome text or 16 greyscale levels
- Full clipboard and editing features
- Scan join feature for taking wide scans
- Cut, paste, magnify, flip, rotate, invert, crop, edit and many more editing features
- Workd in all 3 resolutions
- Save a variety of picture file formats
- High resolution printer driver with more drivers forthcoming
- GEM menu and fast icon driven controls
- Keyboard shortcuts

ONLY £99.00

Product	Price	Order No.
Power Scanner	£99.00	9406

QJ SUPERCHARGE JOYSTICK

The QJ Supercharger has many design features which will enhance your gameplay.
These include: Autofire, ergonomically contoured handgrip, durable nylon centre stick, 6 durable micro switches and four stabilizing suction cups.

Product	Price	Order No.
QJ Supercharger Joystick	£10.99	9405

MAVIS BEACON TEACHES TYPING

Simply the finest typing program in the world, this award winning software takes you step by step through the keyboard. Coaching you at your own speed and skill level, monitoring your progress, the stunning graphics, the help facilities and complete typing text-book makes learning to type interesting and fun.

Product	Price	Order No.
Mavis Beacon Teaches Typing	£24.95	9477

RE-INK SPRAY

Save money and the environment with Re-Ink Spray and bring back life to your exhausted printer ribbon. Simple and cost effective, it can save you up to 90% on ribbon costs and gives cleaner, blacker print with no blotches and it works for all fabric ribbons. Just open the ribbon case, spray Re-Ink onto the ribbon and hey presto!.

Product	Price	Order No.
Re-Ink Spray	£12.95	9179

COVERDISKS

Did you miss out on any 1992 **Atari ST User** CoverDisks? If so, now is your chance to obtain our pack of 12 CoverDisks for 1991 and 1992, and packs of 6 CoverDisks from January to June and July to December 1992.

Product	Price	Order No.
12 CoverDisks (Jan-Dec 91)	£15.00	9338
12 CoverDisks (Jan-Dec 92)	£15.00	9143
6 CoverDisks (Jan-Jun 92)	£9.00	9140
6 CoverDisks (July-Dec 92)	£9.00	9141

BOOKS

Spreadsheets, The Easy Way – This flexible book enables it to be used with almost every major spreedsheet package on the market. It has easy step by step instructions for beginners, a how to section for reference purposes and so hthe book is suitable for ALL computer users

Atari ST Explored – This is probably the most comprehensive guide available to Atari GEM operating system and main ST/STE languages. The text is liberally illustrated with diagrams and examples making it easy to follow and understand.

Product	Price	Order No.
Corish's Computer Games Guide	£14.95	9435
Real Time Graphics (Book only)	£12.95	9146
Real Time Graphics (Book & Disk)	£17.95	9147
Atari ST Explored	£9.95	9187
Spreadsheets – The Easy Way	£12.95	9251

BARGAIN BOX

Even our Aladdin's Cave of goodies gets crowded from time to time, take a look at the great offers below, if you spend more than £20 on any of the BARGAIN products in this box you will receive, absolutely free of charge, a smart ExecuCard calculator.

Only available while stocks last

Product	Price	Order No.
Fun School 3 (Under 5)	£14.00	9496
Fun School 3 (5-7)	£14.00	9497
Fun School 3 (Over 7)	£14.00	9498
Dust Cover (520ST)	£3.95	9116
Disk Storage Box	£3.95	9135
Personal Finance Manager Plus	£25.00	9103
DG Base	£30.00	9139
Art Tutor	£12.00	9480
ST Vidi RGB Splitter	£50.00	9160
ST Midi Sudio Master	£85.00	9108
Gasteiner Mouse	£14.00	9380
Mouse Mat	£4.95	9126
Trojan Phazer Gun with 2 Games	£39.95	9171
Trojan Phazer Gun, 2 games plus Firestar and Enforcer games	£49.95	9142
The Enforcer Game	£9.95	9180
The Firestar Game	£9.95	9191
Atari Execucard Offer	FREE	9122
Execucard FREE with any BARGAIN BOX order over £20		

BINDER & BACK ISSUES

If you've missed any of these issues, now's your chance to put things right, by either buying an individual issue or a full six months' worth. But hurry – stocks are limited! Keep all your back issues in pristine condition with the **Atari ST User** binder a must for any serious Atari user.

Product	Price	Order No.
March 1993 + 3.5" disk	£3.50	9244
April 1993 + 3.5" disk	£3.50	9246
May 1993 + 3.5" disk	£3.50	9252
Dec '92 - May '93 + 3.5" disks	£18.00	9111
Atari ST User Binder	£5.95	9478

ATARI ST USER READER OFFERS

Offers subject to availability,

All prices include UK postage, packing and VAT. For orders over £10 please add £5 for Eire/EEC, £10 for overseas unless specified above. Overseas orders despatched by Airmail.

Valid to June 30, 1993

PRODUCT	ORDER NO.	PRICE
Please add postage as detailed		

☐ Please tick if you do not wish to receive promotional material from other companies. TOTAL £

I wish to pay by:

☐ Cheque/Eurocheque made payable to Europress Direct

☐ Access/Mastercard/Eurocard/Barclaycard/Visa/Connect Expiry Date / /

Name _____ Signed _____

Address _____

_____

_____ Post Code _____

Daytime telephone number _____

Send to: Europress Direct, FREEPOST, Ellesmere Port, South Wirral L65 3EB (No stamp needed if posted in UK)

Products are normally despatched within 48 hours of receipt but delivery of certain items could take up to 28 days

STU6

THE BEGINNERS GUIDE TO STOS BASIC

A complete programming course for the Atari ST/STE.
618 Page, ring-bound course manual + 2 double-sided disks.
Over 190 programming examples.

The Beginners Guide to STOS Basic introduces the reader in a step-by-step fashion to what is one of the most powerful and versatile programming languages available for the Atari ST range of computers – STOS BASIC.

Learn how to produce shoot-em-up games, art programs, junior educational programs, GCSE mathematics programs, databases, word processors, musical programs and much much more.

The course takes the newcomer from basic principles through to the development of complete programs. A practical approach is adopted throughout with the emphasis being on using the computer rather than wading through reams of theory. Programming should be fun, and with this in mind, the course tries to cover as many interests as possible.

RING, WRITE OR FAX FOR A FULL INFORMATION SHEET

MT SOFTWARE (Dept STU)
Greensward House
The Broadway
Totland, I.O.W. PO39 0BX

Tel: 0983 756056
Fax: 0983 755800

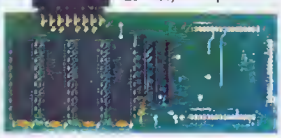
Access VISA MasterCard EUROCARD

ATARI ST USER ADVERTISERS' INDEX

A.C.S. Electronics 92
Analogic Computers 11, 33
Aquila 50
Eagle Software 62
Emerald City 50
Europress Direct 96, 97
Evesham Micros 98
Gajits Music Software 88
Games HQ 76
Gasteiner 6
HCS Engineering 26
Hi-Soft ..... OBC
Ladbroke Computers 2, 3
LAPD 42
Marpet Developments 36
MT Software 98
New Age PDL 50
On-Line Entertainment 76
Power Computing ..... IBC
Silica Systems 45, 81
Snap Computer Supplies 76
Special Reserve 64, 65
ST Direct 90
System Solutions 9
T.S.C. 50
Tecnomail 92
The ST Club 90
Warpzone PDL 54, 55
We Serve 16
Wizard PD 90
WTS Electronics 26

520ST PLUG-IN 1MB SOLDERLESS RAM UPGRADE

Allows easy upgrade to a total 1Mb RAM • Simple, fast and effective RAM upgrade path • Suits almost any 520ST model (not suitable for STE machines) • Requires no soldering or technical know-how



Only £49.95

N.B. Due to the large variance in design of the Atan ST, there is a small minority of boards in existence which may require a little soldering.

NEW PHILIPS TV/MONITOR

With its dedicated monitor input, this model combines the advantages of a high quality 15" medium resolution colour monitor with the convenience of remote control Teletext TV - at an excellent low price ! Features dark glass screen for improved contrast.

£249.00 Including VAT, delivery & cable

Monitor Switch Box - switch between colour / mono monitors without the need for unplugging. *Great value!* ..... £ 13.95

Philips CM8833 Mk.II Monitor (Genuine UK version, stereo sound) - includes cable, 1 Year on-site maintenance and 'Lotus Esprit Turbo 2' game ..... £ 229.00

SPECIAL OFFER !!!
FIRST WORD PLUS + TIMEWORKS DTP 2 ONLY £49.95
Available with any hardware purchase over £75.DD.

TRUEMOUSE

WE GUARANTEE that this is the smoothest, most responsive and accurate replacement mouse you can buy for your Atari ST. Excellent performance, with a 300dpi resolution. Amazing low price!

£14.99 SATISFACTION GUARANTEED

GOLDEN IMAGE OPTICAL MOUSE

NEW LOWER PRICE! ..... £ 29.00

520 STE Discovery Extra Pack	£ 249.99
With 1Mb RAM fitted .... £ 269.99 2Mb .... £ 349.99 4Mb	£ 449.99
1040 STE Family Curriculum Pack	£ 289.99
With 2Mb RAM fitted .... £ 389.99 4Mb	£ 489.99
Dust Covers - available for any ST ..... £ 4.95 for any MEGA	£ 9.95
520 STE 1Mb upgrade (2 x 256k SIMMS)	£ 14.95
520/1040 STE 2Mb upgrade (2 x 1Mb 9-Chip SIMMS)	£ 100.00
Trackball	£ 29.95
Joystick / Mouse ports accessibility adapter For STF/STFM/STE machines	£ 4.95
ZY-FI Amplified Stereo Speaker System	£ 39.95
VIDI-12 ST incorporating VIDI-Chrome	£ 99.95
VIDI Complete Colour Solution	£ 160.00
VIDI-RGB automatic colour separator add-on for colour input	£ 64.95
Atari LYNX-2 inc. "Batman Returns" and Power Supply	£ 89.99
LYNX Games while stocks last	£ 16.99
Star LC 20 Printer Successor to the LC 10, 4 fonts, 180/44cps	£ 129.99
Star LC 100 Entry level 9-pin colour, 4 fonts	£ 168.03
Star LC 24-100 24-pin, 5 fonts, 192/64cps	£ 196.23
Star LC 24-20 MkII 24-pin, 210cps high speed draft mode	£ 229.13
Hewlett-Packard Deskjet 500	£ 351.33
Hewlett-Packard Deskjet 550C COLOUR	£ 645.08

3½" FLOPPY DRIVES

Very quiet • Slimline design • Cooling Vents • Sleek, high quality metal casing • Full 1Mb Unformatted Capacity • Quality Panasonic / Citizen Drive Mechanism • Convenient On / Off switch on rear of drive • Long reach connection cable for location either side of computer

INCLUDES ITS OWN EXTERNAL PLUG-IN PSU
Beware of other makes of drive that take their power from the joystick port !

Only £57.99

520 STFM 1Mb Internal Drive Upgrade Slight case mods required ..... £ 49.95

400DPI HANDY SCANNER

QUALITY SCANNING - AT THE RIGHT PRICE !

Representing outstanding value for money, this package combines *top quality* scanning hardware with the distinctively powerful *DAATASCAN PROFESSIONAL* software.

At a genuine 400dpi scanning resolution, this new scanner produces truly superb quality scans. Has a full 105mm scanning width, variable brightness control and 100 / 200 / 300 / 400dpi resolution. **Daatascan Professional** scanning *and* editing software allows real-time scanning in either line art or in grey scales. Provides powerful editing features and excellent compatibility with most DTP and Paint Packages, eg. Deluxe Paint, Touch-Up.

Only £99.99

Evesham Micros

RETAIL SHOWROOMS

Unit 9 St. Richards Rd
Evesham
Worcs WR11 6TD
☎ 0386 - 765180
fax : 0386 - 765354

5 Glisson Road
Cambridge CB1 2HA
☎ 0223 - 323898
fax : 0223 - 322883

322 Witan Gate
Milton Keynes MK9 2HP
☎ 0908 - 230898
fax : 0908 - 230865

251-255 Moseley Rd
Highgate
Birmingham B12 0EA
☎ 021 - 446 5050
fax : 021-446 5010

Showrooms open Monday, Tuesday, Saturday; 9.00 - 5.30 and Wednesday - Friday; 9.00 - 7.00

ALL PRICES INCLUDE VAT @ 17.5% AND DELIVERY
Same day despatch whenever possible. *Express Courier* Delivery (UK Mainland Only) £6.50 extra.

MAIL ORDER DEPARTMENT

Access SWITCH VISA American Express Carte Blanche

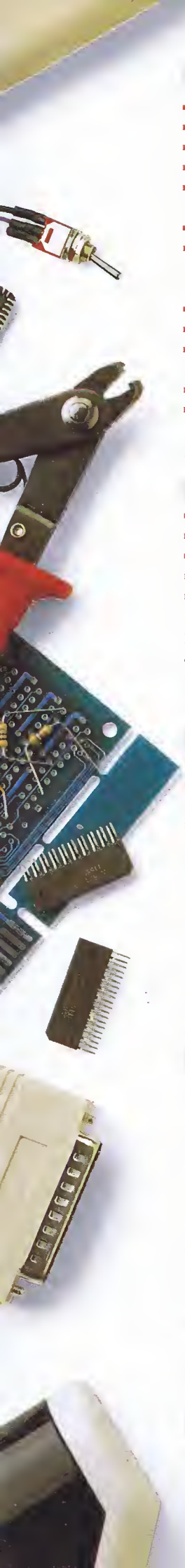
Monday-Friday, 9.00 - 7.00; Saturday, 9.00 - 5.30
Technical support (Mon-Fri, 10.00 - 5.00): 0386-40303

Fax: 0386-765354 **Call us now on ✆ 0386-765500**

Unit 9 St Richards Road, Evesham, Worcs WR11 6TD

Send an Order with Cheque, Postal Order or ACCESS/VISA/SWITCH/AMEX card details. Please allow 5 banking days for Cheque clearance.

Government, Education and PLC orders welcome
All products covered by 12 Months Warranty
All goods subject to availability.



Power Scanner

- Up to 400 DPI
- Real-time greyscale scanning
- Auto scan rate detect
- Monochrome text or 16 greyscale levels
- Full image and clipboard editing features
- Scan join feature for taking wide scans
- Cut, paste, magnify, flip, rotate, invert, crop, edit and many more editing features
- Works in all three resolutions
- Save a variety of picture file formats
- High resolution printer driver with more drivers forthcoming
- GEM menu and fast icon driven controls
- Keyboard shortcuts

Power Scanner £99

Ram Expansion

- No soldering required
- Expand to 2MB or 4MB
- Plugs directly inside the ST
- Full fitting instructions
- Uses latest capacity RAM chips

2MB RAM Expansion £99
4MB RAM Expansion £169
1MB SIMM for STE £25
512K RAM STFM £45

New Blitz Turbo

- Back-up your disks at lightning speed
- Copies from the internal to the external drive
- Cleverly by-passes your ST's disk controller chip
- Back-up an ST disk in around 40 seconds
- Now you can switch between your disk drive and Blitz Turbo without disconnecting your Blitz interface

New Blitz Turbo £25
Original Blitz Turbo £15

Hard Drives

Series 900 HD

- Buffered thru'port
- Optional battery backed clock
- High speed 20ms seek rate
- Write protect switch, protect your valuable data
- Power supply
- ICD interface and utility disk

Series 900 40MB £329
Series 900 100MB £479

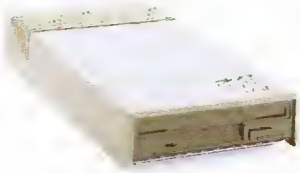
Add £10 for clock to be fitted to Series 900 hard disk

Special Offer

When you purchase this hard drive you can buy Lattice C v5 for £60

Floppy Drives

PC720B



- Virus blocker (prevents viruses)
- Built-in Blitz Turbo
- Boots from drive B
- 12 month warranty

PC720B £65

PC720I

- Atari internal disk drive £39.95

PC720OI

- Official Atari internal disk drive £45

(No case cutting but must be small button version)

PC720P

- Disk drive inc. power supply unit £55

Drive Accessories

Maxell Multi-Colour disks (10) £9.95
Floppy disks bulk supplied .....£POA

Boot from Drive B

If you have an internal drive that is not compatible with "Boot from drive B" this cable will solve your problem £9.95

Optical Hard Drive

- 128MB on one optical disk
- Read and write optical disk
- 40ms running speed
- High power cooling fan
- 25-way and 50-way SCSI ports
- SCSI ID switch

(The link™ must be used to connect drive to Atari computer)

128MB External optical drive £999
128MB Optical drive & The Link™ £1068
128MB 3.5" Optical disk .....£39.95 each

Software

Lattice C v5.0 .....£89
Devpac v2.0 .....£29
HiSoft C £29
Proflight £29
Harlekin £45
Wercs £24
Knife ST £29
PC Ditto £29
Neo Disk v3.0 .....£34
Devpac v3.0 .....£69.95

Philips CM8833 MK2

- With cable
- On-site maintenance

CM8833 MK2 .....£239

POWER

Power Computing Ltd
Unit 8 Railton Road
Woburn Road Ind. Estate
Kempston Bedford
MK42 7PN

Tel 0234 843388 Fax 0234 840234

Specifications & prices are subject to change without notice
All trademarks acknowledged, VAT included

ICD

The Link™

- External SCSI host adaptor
- Connect Atari ST to external SCSI devices e.g. External HD, floppy drives, Optical drives, CD ROM drives which were originally designed for the Apple Mac, IBM PC, Commodore Amiga, NeXT Atari TT, Falcon
- Atari ST must have a DMA port
- Plug-in and go
- Software included
- Compact interface
- 63 x 76 x 19mm in size
- No power supply needed

The Link™ £69.95

Printers

All printers include cables and next day delivery

Star Printers

LC20.....£139
LC100 colour £165
LC200 colour £195
LC 15 .....£229
LC24-100 .....£185
LC24-200.....£225
LC24-200 colour £279
Laser LS-5 .....£699
Laser LS-5EX £899
Laser LS-5TT £999
SJ-48 .....£229

Epson Printers

Laser

EPL-4000 .....£639
EPL-4300 .....£799
EPL-8100 .....£1349

Inkjet

SQ-870 .....£509
SQ-1170 (132 column printer) £629

Dot Matrix

LQ-570 .....£289
LQ-1070 (132 column printer).....£449
LQ-100 .....£209
LX100 .....£189

48HR Delivery £2.50 24HR Delivery £4.50 Parcel Post Delivery £1 (U.K. Mainland only)

More Atari News & Views from HiSoft

When only the Best will do...

Falcons from HiSoft

Yes, we have them - now! In what is an unusual step for us, we have decided to stock both the 1Mb and the 4Mb/65Mb HD versions, the retail prices of which are £599 and £999 inclusive.

We have un-rivalled (in the UK at least) knowledge of the Falcon hardware, its operating system and the tools that will be available for this amazing machine; in addition, we firmly believe in quality of customer service, both before and after a sale. So why not give us a call to discuss the benefits of this superb new computer and how it can best meet your requirements?

Language News

Watch our for new versions of our popular languages; Devpac 3, HiSoft BASIC 2 and Lattice C 5. These latest releases include full Falcon030 support with extra libraries, an improved debugger and a comprehensive handbook that discusses using these products on a Falcon computer.

The new libraries include routines for accessing the video and audio sub-systems, Speedo GDOS, MultiTOS, the DSP processor and other new aspects of the Falcon030. As such they are essential for any programmer with a Falcon computer or for anyone who wants to support this fabulous machine.

These Falcon-enhanced versions will be stickered as such on the outside of the box (an example is shown below) and so will be easily recognisable. Upgrade prices start from £10 for each product - please call for details.

The Falcon030-enhanced sticker that will appear on all our software packages that include special features to take advantage of the Falcon computer.

Speedo GDOS and MultiTOS

At long last, both MultiTOS and Speedo GDOS are available in the UK. MultiTOS is Atari's official pre-emptive, multi-tasking operating system allowing you to schedule a variety of tasks on your computer. Speedo GDOS is the new outline font system based on Bitstream's Speedo font engine.

Both programs are released on 22 May, require upwards of 2Mb of memory and are complete with manuals and free 30-day support from HiSoft.

TruePaint

TruePaint is the first art package to take advantage of the true colour capabilities of the Falcon030 computer ... and it is shipping now. Some of the highlights of the product are:

- *Works on all STs and Falcons in all screen resolutions including 768x480 True Colour*
- *Easy-to-use multi-window environment with menus, toolbox and keyboard shortcuts*
- *Full range of drawing tools*
- *A large variety of effects including shear, wrinkle, smooth, rainbow etc.*
- *Flexible zoom, full screen mode with edit, colour picker, bézier curves ...*
- *Animation, Font/Speedo GDOS support, wide variety of file formats including IFF, TIFF, GIF, JPEG, Targa, IMG, Neochrome and more*
- *Extensive and informative 170-page manual*

TruePaint was launched at the 7th International Computer Show and has already gained wide acclaim from its users. For more information, please call us and ask for a brochure.

Diamond Edge

From the authors of Diamond Back, the popular hard disk backup program, comes a new package that is essential to any serious user of an Atari 680x0 computer.

Diamond Edge is a complete set of management, optimisation, diagnostic, repair and data recovery tools for use with floppy disks and hard disks. Version 1.04 is now available, this supports the IDE hard disk within the Falcon030 - call for upgrade details.

The current version of Diamond Back, 2.51, has full support for the new 21Mb flopticals - again. contact us for information on upgrading.

DataLite 2

We are pleased to have acquired the exclusive rights to this new program from Germany.

DataLite is a sophisticated 'disk doubler' which, by using a combination of compression & de-compression techniques, can save up to 50% of the space on your hard drive or on your floppy disks. We have thoroughly tested this invaluable program and we have found it to be extremely reliable and easy-to-use.

DataLite compresses all types of data on your disk, not just text files, and thus gives you optimal space saving. DataLite is a logical companion for Diamond Edge and Diamond Back II and we have a special, limited offer for a combined pack of all three utilities (see the box below).

Harlekin 3

The latest upgrade to the immensely popular Harlekin suite of desk accessories is released on 22 May. The package has been much improved and extended including non-modal dialogs, a multi-window editor, full Multi-TOS and Falcon030 support and a new manual. Please call or write for full details and upgrade information.

Special Spring 93 Prices from HiSoft

As a very special mail order promotion, we have reduced the prices of some of our software titles for a limited time to readers of this magazine. The following products will be available, subject to stock, at lower prices for the period 22 May until 31 June 1993. You can only order directly from HiSoft using your credit/debit card or by sending us a cheque/postal order (payable to HiSoft), quoting reference ATS93M1. All prices include VAT and P&P from HiSoft.

Diamond Edge, Diamond Back II, DataLite Package	£99	ProFlight	£14.95
		Lattice C 5 - non Falcon	£99.95
Speedo GDOS and MultiTOS package	£49.95	HiSoft BASIC 2 - non Falcon	£54.95
		Devpac 3 - non Falcon	£54.95
Wordflair 2 inc Speedo GDOS	£59.95	Harlekin 2	£39.95

All HiSoft's products should be available through your local computer dealer. If you have difficulty in obtaining a title you can order directly from HiSoft using your credit or debit card - just call 0525 718181 and ask for mail order sales.

HiSoft
High Quality Software

The Old School, Greenfield,
Bedford MK45 5DE UK.
Tel: +44 (0) 525 718181
Fax: +44 (0) 525 713716